



Express Mail No: EV 603557117 US

IN THE UNITED STATES PATENT AND  
TRADEMARK OFFICE

Application Number: 11/154/894  
 First Named Inventor: Lawrence G. Hopkins  
 Filed: June 15, 2005  
 Group Art Unit: 3744  
 Title: Fan Array Fan Section in Air Handling Systems  
 Attorney Docket: Hunt-FanArr3

## SUBMISSION UNDER 37 C.F.R. 1.99 (a)

Pursuant to 37 C.F.R. 1.99 the following documents are submitted for consideration by the office in the above captioned application. A copy of each listed patent is enclosed herewith.

Patent Number	Date of Publication	First Named Inventor
US 3,332,621	07/25/1967	Tanner
US 4,158,527	06/19/1979	Burkett
US 4,494,006	01/15/1985	Staroselsky et al.
US 5,269,660	12/14/1993	Pradelle

As shown in the Proof of Service attached, a copy of this Submission and all documents listed have been served upon the applicant's attorney of record.

Finally, a fee under 37 C.F.R. 1.17(p) of \$180.00 has been included with this filing.

Dated this 20<sup>th</sup> day of December, 2005.

Respectfully Submitted,  
SANTANGELO LAW OFFICES, P.C.

By: 

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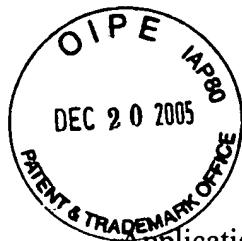
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Application Number: 11/154/894  
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## LETTER OF TRANSMITTAL

Commissioner for Patents  
 P.O. Box 1450  
 Alexandria VA 22313-1450

Enclosed for submission under 37 C.F.R. 1.99 (a) are the following documents:

1. a Submission Under 37 C.F.R. 1.99 (a) including a listing of documents submitted for consideration by the office along with a copy of each document listed;
2. a Proof of Service pursuant to 37 C.F.R. 1.248;
3. this Letter of Transmittal along with a check payable to the Director of the Patent and Trademark Office in the amount of \$180.00; and
4. an Express Mail Certificate and a return postcard.

Please confirm receipt of the documents by applying your date stamp and serial number on the enclosed postcard and returning it to me.

**Please address all future correspondence to: Santangelo Law Offices, P.C., 125 South Howes, Third Floor, Fort Collins, CO 80521.**

I have this 20 day of December, 2005, either myself personally or through my direction of staff at this office, deposited all of the items in the above letter of transmittal with the United States Postal Service as Express Mail, postage prepaid, in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria VA 22313-1450.

Dated this 20<sup>th</sup> day of December, 2005.

Respectfully Submitted,  
SANTANGELO LAW OFFICES, P.C.

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**PROOF OF SERVICE**

The person whose signature appears below confirms that the attached Submission Under 37 C.F.R. 1.99 including a copy of all documents listed therein has been served upon the Applicant of the above captioned application in accordance with 37 C.F.R. §1.248 by transmitting a copy of the documents by first class mail to: Karen Dana Oster, Law Offices of Karen Dana Oster, LLC, PMB 1020, 15450 SW Boones Ferry Road #9, Lake Oswego, OR 97035, which mailing was made this same day.

Dated this 20<sup>th</sup> day of December, 2005.

Respectfully Submitted,

SANTANGELO LAW OFFICES, P.C.

By:

  
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 125 South Howes, Third Floor  
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Express Mail No: EV 603557117 US

IN THE UNITED STATES PATENT AND  
TRADEMARK OFFICE

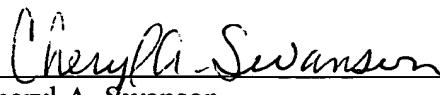
Application Number: 11/154/894  
 First Named Inventor: Lawrence G. Hopkins  
 Filed: June 15, 2005  
 Group Art Unit: 3744  
 Title: Fan Array Fan Section in Air-Handling Systems  
 Attorney Docket: Hunt-FanArr3

**CERTIFICATE OF EXPRESS MAILING**

I, Cheryl A. Swanson, hereby certify to the truth of the following items:

1. I am an employee of Santangelo Law Offices, P.C., 125 South Howes, Third Floor, Fort Collins, Colorado 80521.
2. I have this day deposited the attached Submission Under 37 C.F.R. 1.99 (a) including a listing of documents submitted for consideration by the office along with a copy of each document listed; Proof of Service pursuant to 37 C.F.R. 1.248; Letter of Transmittal along with a check payable to the Director of the Patent and Trademark Office in the amount of \$180.00; and this Express Mail Certificate and a return postcard with the United States Postal Service as "Express Mail" for mailing to: Commissioner for Patents, P.O. Box 1450, Alexandria VA 22313-1450.

Dated this 20<sup>15</sup> day of December 2005.

  
 Cheryl A. Swanson

## United States Patent Office

3,332,621  
Patented July 25, 1967

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3,332,621

## AUTOMATIC CONTROL MEANS

Basil Charles Tanner, London, England, assignor to Head Wrightson &amp; Company Limited, London, England, a company of Great Britain

Filed Sept. 15, 1964, Ser. No. 396,578

Claims priority, application Great Britain, Oct. 10, 1963,  
39,926/63

10 Claims. (Cl. 236—46)

The invention relates to automatic control means and particularly to the automatic control of fans for temperature regulation.

The invention has among its objects to provide means whereby the temperature of a cooling fluid flow is maintained between predetermined limits.

According to the invention temperature regulating means comprises thermostats effective, upon temperature changes, to move contacts to connect cam and timer means to a power supply whereby energisation, de-energisation or a speed change of one or more motor driven fans or the equivalent is effected.

According to the invention furthermore, the temperature regulation is carried out in a series of steps, the steps being spaced apart by determined time intervals so as to allow the temperature to stabilise.

According to the invention moreover two thermostats may be provided, one for increasing the quantity of air flow caused by the fans and one for decreasing the quantity of air flow caused by the fans.

According to the invention further, the cam means may be motor driven and the driving motor de-energised as soon as a timer is started, the timer means being de-energised after a predetermined time period, the cam driving motor being then re-energised if the exhaust of the fluid cooled by the fans is still outside predetermined limits.

The invention is diagrammatically illustrated by way of example in the accompanying drawings in which:

FIGURE 1 shows the basic circuit of the temperature regulating means of the invention;

FIGURES 2 and 3 show the circuit in greater detail and including minor modifications;

FIGURE 4 is a diagram illustrating the relationship between the cam switch operations and the position of the cam shaft.

Referring to FIGURE 1 a cam controller 1, driven by a motor 2, controls the power supply to four two-speed fan motors. A timer and motor 3 control the position of a contact 4. Relay R controls contacts R<sub>1</sub>—R<sub>3</sub>. Thermostats 5 and 6 close when the exhaust fluid from the system being cooled is too hot or too cold respectively having regard to the desired temperature of exhaust fluid.

In operation a single phase supply is applied to terminals N and L.

Assuming that all the fan motors are stationary and that the contact 5 is closed by the over-hot fluid. Contact R<sub>2</sub> is already closed, so that power is supplied through the closed forward limit switch 12 of the cam controller 1, to the motor 2.

The motor 2 rotates the cam controller 1 which closes the low speed contact on the first motor which then starts to run. Contact 7 is a wipe contact which supplies a momentary pulse to the timer 3. When the low speed contact closes, the dotted lines show the position when the contactor is closed. This pulse also energises relay R closing contact R<sub>1</sub> and opening contacts R<sub>2</sub> and R<sub>3</sub>. The motor 2 is thus de-energised and the cam controller 1 stops, but the timer 3 is energised through contact Tc which was closed by the energisation of timer 3. A delay period, governed by the setting of the timer, then ensues to allow the temperature of the exhaust to stabilise

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under the cooling action of the fan. At the end of the delay period the timer trips out, opening contact Tc and de-energising itself and the relay R. Contacts R<sub>2</sub> and R<sub>3</sub> then close and if contact 5 is still closed the cycle is repeated energising the second of the motors to run at low speed. This cycle is repeated at the intervals set by the timer until either contact 5 opens or all the motors are energised to run at high speed and the reverse limit switch 26 is closed and the forward limit switch 12 is opened thus de-energising the motor 2. An alarm is advantageously provided which operates if all the motors are running at high speed and contact 5 still remains closed, thus indicating that either the cooling equipment or the circuitry contains a fault.

The low speed and high speed contactors of each motor are ganged together so that the closing of one automatically opens the other. As the wipe contacts are provided to operate both on opening and on closing of the contactor no wipe contacts are necessary for the high speed contactors. In practice the wipe contacts can be operated by the fan motor starters instead of the cam shaft.

In the reverse operation to that described above, that is to say when the low thermostat contact 6 closes indicating an excessively cool exhaust fluid flow and the cam controller starts to switch motors from high speed down to low speed a time lag is provided so that the motor can run down from high speed, after the contactor is opened, to within a few r.p.m. of low speed before the low speed contactor is closed, mechanical shocks to shafts, gears and couplings are thus avoided.

So long as the contact 6 remains closed at the end of each timer period the cam controller 2 will rotate in the reverse direction until all the motors have been cut down to low speed and then until each motor is cut off completely and the reverse limit switch 26 opened. The forward limit switch 12 has already by then been reclosed and the equipment is thus ready for operation upon a temperature rise.

One suitable thermostat is the "Satchwell" type WT with 18" steps and a range of 40° F. to 170° F. with a 3° fixed differential, these thermostats are of robust construction and are well proven.

The "Rodene" multi-circuit camshaft timer is particularly suited for use in the invention as a cam controller and the "Rodene 7500" series timer is suitable for setting the time delay between steps as it is adjustable for periods between 1 and 72 minutes. This timer takes 10 seconds to reset from its maximum time period and the camshaft speed should therefore be set such as to give 15 seconds between switch operations, this ensures that the timer has reset and is ready for a further operation.

FIGURE 2 shows a modification of the control circuit of FIGURE 1.

The switches 8 and 9 correspond to the switches 5 and 6 of FIGURE 1 but are series connected so that the switch 9, for example, cannot cause reverse rotation of the camshaft controller unless the switch 8 has its contact in the opposite position to that necessary to cause forward rotation of the cam shaft. Shut down due to the thermostat malfunction is thus avoided. Contact 10 replaces contacts R<sub>2</sub> and R<sub>3</sub> in that it is opened by the energisation of the camshaft controller whilst the timer motor is running for the delay period. Contact 11 replaces contact 4 and is closed by the wipe contacts 7 of the low speed contactors thus supplying power to the timer motor 3.

In operation if the normally open contact of switch 8 closes indicating excess heat the motor 2 is connected to the power supply by way of switch 12 and rotates the cam controller 1 to close the low speed contactor of the first motor. Wipe contact 7 energises coil 13 closing contact 11, starting motor 3 and opening contact 10. The

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cam controller is stopped and light 14 being illuminated shows that the equipment is an automatic control. When the timer motor 3 trips out at the end of its period, contacts 10 and 11 close and open respectively and if the normally open contact of switch 8 is still in the closed position the cycle is repeated.

An automatic overcurrent spring circuit breaker 15 is provided and a switch 16 is provided for shut down at the end of a working day in a manner already described.

FIGURE 3 shows a further embodiment of the invention.

The form of temperature sensing shown is a mercury in glass thermometer 17 with probes 18, controlling, by way of relays 27 and 28, two thermostat contacts 19 and 20 which correspond to the previous contacts 5, 6, 8 and 9.

The layout shown in FIGURE 3 includes a pair of mains failure contacts 21, which connect with a relay 22, whereby a contact 23 is held in the operative position so long as there is power on the fan motor bus-bars. If the fan motor bus-bar supply fails during operation, but the single phase supply to the circuit is maintained, relay 22 moves to the position shown on the drawing thus cutting off the supply to clutch 24 and the cam controller 1 rotates to the off position in less than one second. This is to ensure that all the motors do not try to start together as soon as the bus bar supply is restored.

In operation contact 20 is usually in the other position to that shown and contact 19 is as shown. If the exhaust is too hot contact 19 moves to the right hand position, and contact 20 is in the right hand position, and therefore motor 2 is fed by way of breaker 15, contact 16, contact 25, contact 20, contact 19 and contact 12. Motor 2 rotates closing the low speed switch on the first motor and wipe contact 7. Wipe contact 7 energises relay 13 which switches contact 25 to the other position to that shown and starts the timer. Contact 25 also de-energises motor 2 but acts as a holding contact to the wipe contact 7 as it maintains the supply to the timer and to the clutch 13. Clutch 24 remains energised. Immediately before the low speed contact on the first motor closes, contact 26 closes in readiness for the return rotation when necessary. As before the delay period ensues whilst the timer is running, then the timer trips out and if contact 19 is still in the right hand position the cycle starts again.

The temperature sensing means 17 and 18 can be used to provide a permissible temperature band only one degree wide. The lower probe 72 shown is used as a common reference and movement of the mercury column due to a temperature extreme connects up the probes determining the boundaries of the temperature band and closes relays 27 and 28 to cause a circulating current through one of the rectifiers 29 and the transformer 30.

Operational of relays 27 and 28 moves the contacts 19 and 20 respectively to the right hand position as shown. Thus at the desired temperature relay 27 is energised and relay 28 is not, contact 20 is in the opposite position to that shown and contact 19 is as shown. If the exhaust is too cool the contacts are in the position shown. If it is too hot both contacts 19 and 20 are in the opposite position to that shown.

Switch 16 in its normal position energises the circuits for normal sequential temperature control of the fan motor whereas in its alternate position switch 16 connects one side of the power line to motor 2 via contacts 26 to return the cams to their original positions.

The construction according to the invention is particularly suitable for the temperature control of water used as the heat transfer medium in a power generation cycle.

The water is fed through heating means and converted into steam. The steam drives a turbine and is then condensed and fed to cooling towers cooled by the fans controlled by the apparatus of the invention. The water passing downwardly from spray nozzles against a cooling air stream drawn upwardly by the fans. The water falls into

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a reservoir pond from which it is drawn into the heating means again. The thermostat contacts 5 and 6, 8 and 9, 17 and 18 or 19 and 20 are advantageously provided either between the condenser and the cooling towers, or between the pond the heating means. The latter position allows for variations caused by atmospheric conditions and ensures a constant temperature of feed to the heating means at all times.

The construction according to the invention is also applicable to the cooling systems of nuclear reactors, particularly the cooling systems of small experimental reactors.

FIGURE 4 is a graph showing the energisation of the fans and limit switches at different angular displacements of the cam shaft from a zero position.

I claim:

1. Temperature regulating means comprising, in combination, at least one fan, a motor for driving each fan, a timer, at least one cam, electrical contacts operable by said cam effective to alter the power supplied to said motor from a power source, a cam driving motor and at least one thermostat effective, upon temperature change of a medium acted upon by said fan, to energise said cam driving motor, to rotate said cam, operate said electrical contacts, and effect a speed change of said motor, said timer being coupled to said electrical contacts so that operation of said electrical contacts being effective to energise said timer and de-energise said cam driving motor for a predetermined period of time.

2. Temperature regulating means as defined in claim 1, wherein the temperature regulation is carried out in steps, the period between said steps being preset on said timer, said timer being connected to de-energise itself at the end of the preset time period and being connected to re-energise said cam driving motor if said medium is still outside predetermined temperature limits.

3. Temperature regulating means as defined in claim 2, wherein two thermostats are provided, a first thermostat being effective, by means of said cam driving motor, said cam and said electrical contacts to raise the speed of said motor and a second thermostat being effective by means of said cam driving motor, said cam and said electrical contacts to reduce the speed of said motor, and in which an upper of said predetermined temperature limits can be set on said first thermostat and in which a lower of said predetermined temperature limits can be set on said second thermostat.

4. Temperature regulating means as defined in claim 1, wherein operation of said electrical contacts is effective to energise said timer and de-energise said cam driving motor by means of wipe contacts mounted on said electrical contacts.

5. Temperature regulating means as defined in claim 3, in which said cam driving motor can be supplied with power from a power source through an electrical contact on one of said first and second thermostats, the contacts on both said first and second thermostats being open when said medium is between said predetermined temperature limits.

6. Temperature regulating means comprising, in combination, at least one fan, a motor for driving each fan, a timer, at least one cam, electrical contacts operable by said cam effective to alter the power supplied to said motor from a power source, a cam driving motor and at least one thermostat, effective, upon temperature change of a medium acted upon by said fans, to energise said cam driving motor, to rotate said cam, operate said electrical contacts, and operate switch means by which switch means said motor is connectable to said power source, operation of said electrical contacts being effective to energise said timer and de-energise said cam driving motor.

7. Temperature regulating means as defined in claim 6, wherein the temperature regulation is carried out in 75 steps, the period between said steps being preset on said

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timer, said timer being connected to de-energise itself at the end of the preset time period and being connected to re-energise said cam driving motor if said medium is still outside predetermined temperature limits.

8. Temperature regulating means as defined in claim 7, wherein two thermostats are provided, a first thermostat being effective, by means of said cam driving motor, said cam and said electrical contacts to connect said motor to said power source, and a second thermostat being effective by means of said cam driving motor, said cam and said electrical contacts to disconnect said motor from said power source, and in which an upper of said predetermined temperature limits can be set on said first thermostat and in which a lower of said predetermined temperature limits can be set on said second thermostat.

9. Temperature regulating means as defined in claim 6, wherein operation of said electrical contacts is effective to energise said timer and deenergise said cam driving

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motor by means of wipe contacts mounted on said electrical contacts.

10. Temperature regulating means as defined in claim 8, in which said cam driving motor can be supplied with power from a power source through an electrical contact on one of said first and second thermostats, the contacts on both said first and second thermostats being open when said medium is between said predetermined temperature limits.

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2,038,578	4/1936	Lamb	236—11 X
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WILLIAM J. WYE, *Primary Examiner.*

ALDEN D. STEWART, *Examiner.*

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July 25, 1967

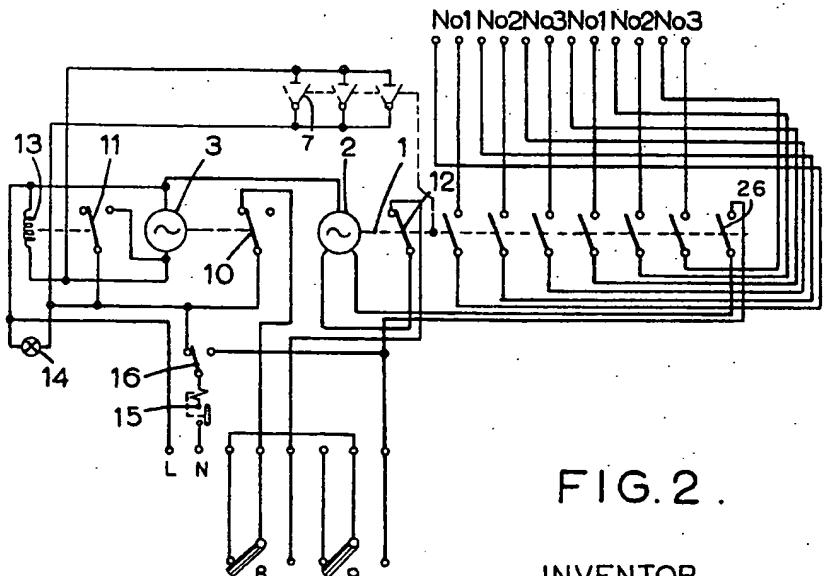
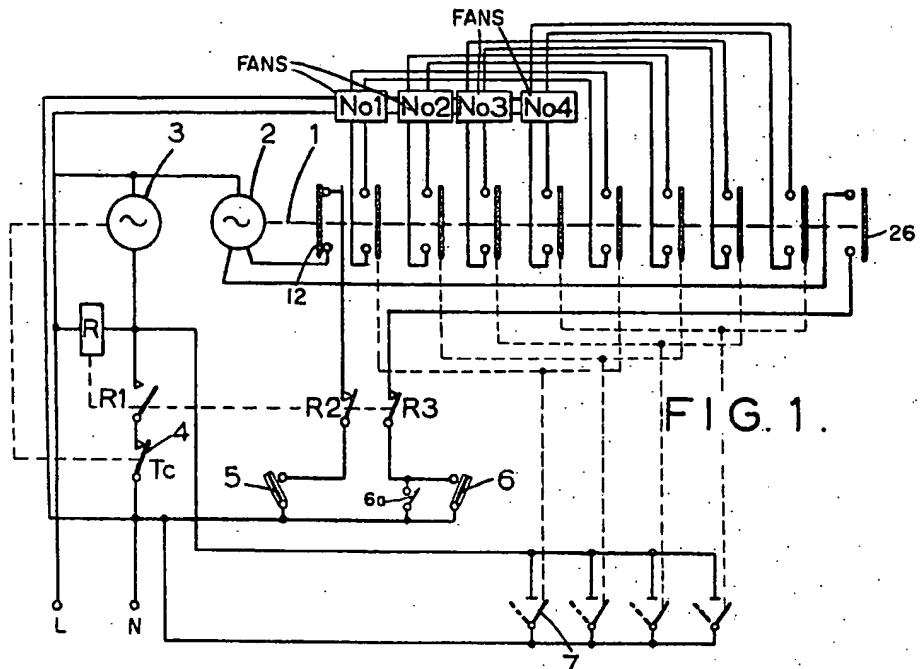
B. C. TANNER

3,332,621

AUTOMATIC CONTROL MEANS

Filed Sept. 15, 1964

3 Sheets-Sheet 1



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BASIL CHARLES TANNER

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Morgan, Finegan, Dorlane & Pine  
ATTORNEY

July 25, 1967

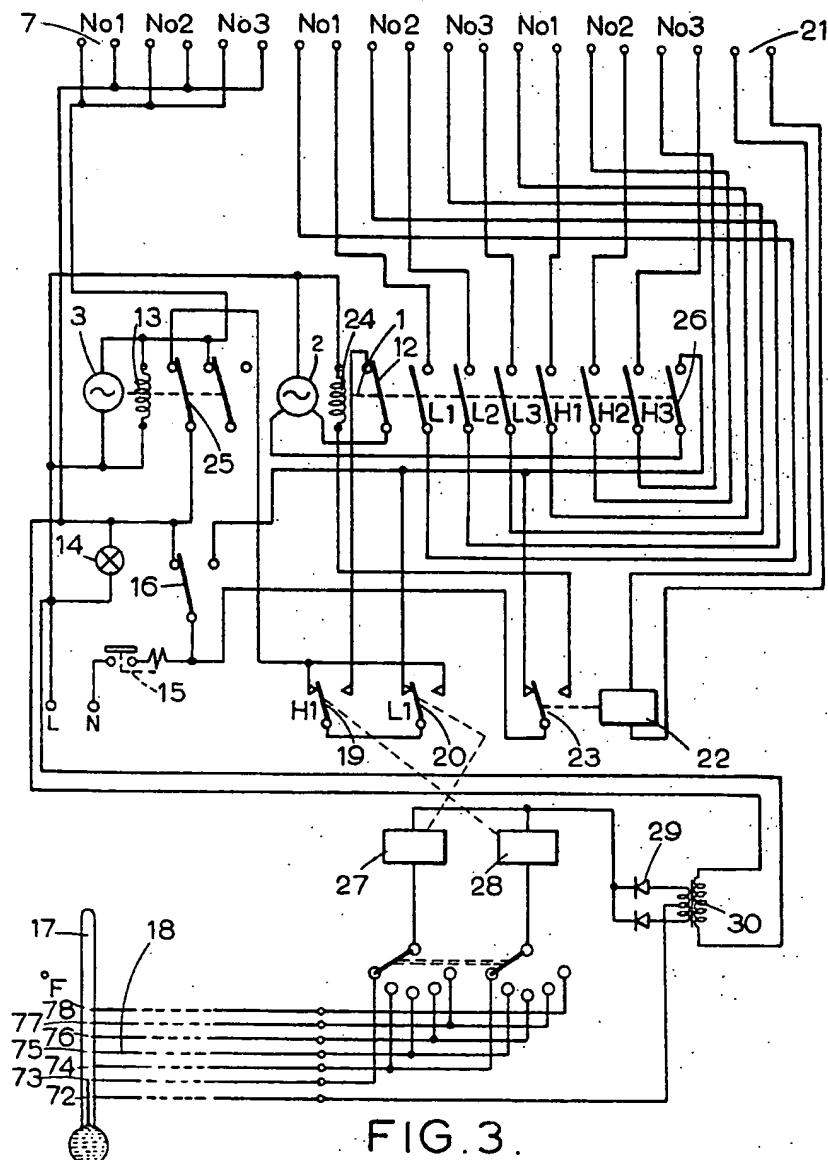
B. C. TANNER

3,332,621

AUTOMATIC CONTROL MEANS

Filed Sept. 15, 1964

3 Sheets-Sheet 2



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CL 474

July 25, 1967

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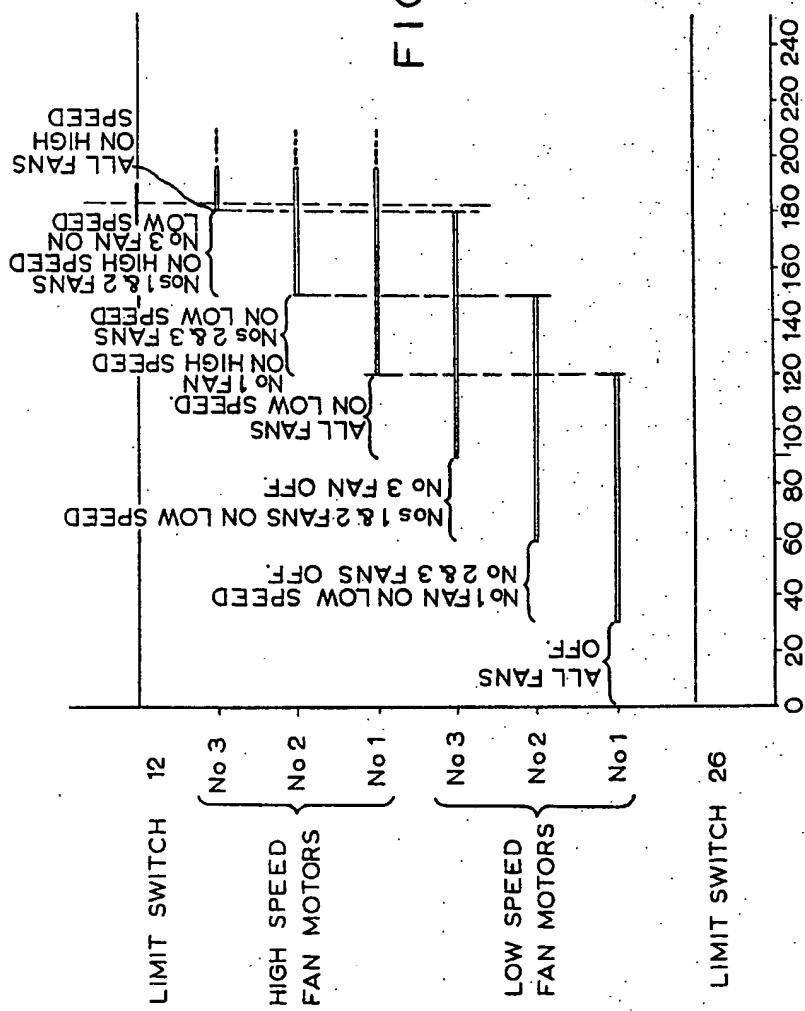
3,332,621

AUTOMATIC CONTROL MEANS

Filed Sept. 15, 1964

3 Sheets-Sheet 3

FIG. 4



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PTO/SB/21 (09-04)

Approved for use through 07/31/2006. OMB 0651-0031

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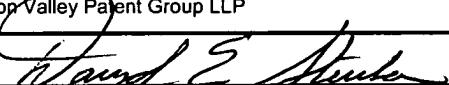
(to be used for all correspondence after initial filing)

		Application Number	11/154,894
		Filing Date	06/15/2005
		First Named Inventor	Lawrence G. Hopkins
		Art Unit	3744
		Examiner Name	Unknown
Total Number of Pages in This Submission	2	Attorney Docket Number	HTR007-3C US (new)

### ENCLOSURES (Check all that apply)

<input type="checkbox"/> Fee Transmittal Form	<input type="checkbox"/> Drawing(s)	<input type="checkbox"/> After Allowance Communication to TC
<input type="checkbox"/> Fee Attached	<input type="checkbox"/> Licensing-related Papers	<input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences
<input type="checkbox"/> Amendment/Reply	<input type="checkbox"/> Petition	<input type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)
<input type="checkbox"/> After Final	<input type="checkbox"/> Petition to Convert to a Provisional Application	<input type="checkbox"/> Proprietary Information
<input type="checkbox"/> Affidavits/declaration(s)	<input checked="" type="checkbox"/> Power of Attorney, Revocation	<input type="checkbox"/> Status Letter
<input type="checkbox"/> Extension of Time Request	<input type="checkbox"/> Change of Correspondence Address	<input checked="" type="checkbox"/> Other Enclosure(s) (please identify below):
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<input type="checkbox"/> Reply to Missing Parts/ Incomplete Application	<input type="checkbox"/> Landscape Table on CD	
<input type="checkbox"/> <input type="checkbox"/> Reply to Missing Parts under 37 CFR 1.52 or 1.53		
Remarks		
Please charge Deposit Account No. 50-2263 for any fee(s) due.		
Please note that a new attorney docket number (see above) has been assigned to this application.		

### SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name	Silicon Valley Patent Group LLP		
Signature			
Printed name	David E. Steuber		
Date	01/04/2006	Reg. No.	25,557

### CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below:

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Typed or printed name	David E. Steuber	Date	01/04/2006

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1:11 and 1:14. This collection is estimated to 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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PTO/SB/81 (04-05)

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**POWER OF ATTORNEY  
and  
CORRESPONDENCE ADDRESS  
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Application Number	11/154,894
Filing Date	06/15/2005
First Named Inventor	Lawrence G. Hopkins
Title	Fan Array Fan Section In Air- ...
Art Unit	3744
Examiner Name	Unknown
Attorney Docket Number	HTR007-3C US (new)

I hereby revoke all previous powers of attorney given in the above-identified application.

I hereby appoint:

Practitioners associated with the Customer Number:

34036

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Practitioner(s) named below:

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as my/our attorney(s) or agent(s) to prosecute the application identified above, and to transact all business in the United States Patent and Trademark Office connected therewith.

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I am the:

Applicant/Inventor.

Assignee of record of the entire interest. See 37 CFR 3.71.  
Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)

**SIGNATURE of Applicant or Assignee of Record**

Signature		Date	12/21/05
Name	Lawrence G. Hopkins	Telephone	503-740-7610
Title and Company	R&D Director, Huntair, Inc.		

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below\*.

\*Total of 1 forms are submitted.

This collection of information is required by 37 CFR 1.31, 1.32 and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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APPLICATION NUMBER	FILING OR 371 (c) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO/TITLE
11/154,894	06/15/2005	Lawrence G. Hopkins	Hunt:FanArr3

26790  
 LAW OFFICE OF KAREN DANA OSTER, LLC  
 PMB 1020  
 15450 SW BOONES FERRY ROAD #9  
 LAKE OSWEGO, OR 97035



\*OC000000017834936\*

CONFIRMATION NO. 2747

Date Mailed: 01/12/2006

### NOTICE REGARDING CHANGE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 01/06/2006.

- The Power of Attorney to you in this application has been revoked by the applicant. Future correspondence will be mailed to the new address of record(37 CFR 1.33).

  
 BERHANU GIRUM  
 PTOSS (703) 305-0677

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CL 478



## UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
 United States Patent and Trademark Office  
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APPLICATION NUMBER	FILING OR 371 (c) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
11/154,894	06/15/2005	Lawrence G. Hopkins	HTR007-3C US

34036  
 SILICON VALLEY PATENT GROUP LLP  
 2350 MISSION COLLEGE BOULEVARD  
 SUITE 360  
 SANTA CLARA, CA 95054



\*OC000000017834943\*

Date Mailed: 01/12/2006

## NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 01/06/2006.

The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

  
 BERHANU GIRUM  
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PTO/SB/21 (09-04)

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U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

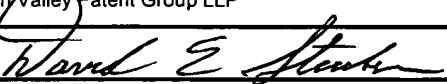
TRANSMITTAL  
FORM

(to be used for all correspondence after initial filing)

		Application Number	11/154,894
		Filing Date	06/15/2005
		First Named Inventor	Lawrence G. Hopkins
		Art Unit	3744
		Examiner Name	Unknown
Total Number of Pages in This Submission	27	Attorney Docket Number	HTR007-3C US

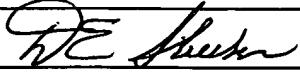
ENCLOSURES (Check all that apply)			
<input type="checkbox"/> Fee Transmittal Form	<input type="checkbox"/> Drawing(s)	<input type="checkbox"/> After Allowance Communication to TC	
<input type="checkbox"/> Fee Attached	<input type="checkbox"/> Licensing-related Papers	<input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences	
<input type="checkbox"/> Amendment/Reply	<input type="checkbox"/> Petition	<input type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)	
<input type="checkbox"/> After Final	<input type="checkbox"/> Petition to Convert to a Provisional Application	<input type="checkbox"/> Proprietary Information	
<input type="checkbox"/> Affidavits/declaration(s)	<input type="checkbox"/> Power of Attorney, Revocation	<input type="checkbox"/> Status Letter	
<input type="checkbox"/> Extension of Time Request	<input type="checkbox"/> Change of Correspondence Address	<input checked="" type="checkbox"/> Other Enclosure(s) (please Identify below):	
<input type="checkbox"/> Express Abandonment Request	<input type="checkbox"/> Terminal Disclaimer	<input type="checkbox"/> Return Postcard	
<input checked="" type="checkbox"/> Information Disclosure Statement	<input type="checkbox"/> Request for Refund		
<input type="checkbox"/> Certified Copy of Priority Document(s)	<input type="checkbox"/> CD, Number of CD(s) _____		
<input type="checkbox"/> Reply to Missing Parts/ Incomplete Application	<input type="checkbox"/> Landscape Table on CD		
<input type="checkbox"/> Reply to Missing Parts under 37 CFR 1.52 or 1.53			
<input type="checkbox"/> Remarks Please charge Deposit Account No. 50-2263 for any fee(s) due.			

## SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name	Silicon Valley Patent Group LLP		
Signature			
Printed name	David E. Steuber		
Date	01/11/2006	Reg. No.	25,557

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Signature			
Typed or printed name	David E. Steuber	Date	01/11/2006

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If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

CL 480

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventors: Lawrence G. Hopkins; ;  
 Assignee: Huntair, Inc.  
 Title: Fan Array Fan Section In Air-Handling Systems  
 Serial No.: 11/154,894 Filing Date: 06/15/2005  
 Examiner: Unknown Group Art Unit: 3744  
 Docket No.: HTR007-3C US Confirmation No: 2747

Santa Clara, California  
January 11, 2006

COMMISSIONER FOR PATENTS  
P.O. BOX 1450  
ALEXANDRIA, VA 22313-1450

**SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT  
UNDER 37 CFR §1.97(b)**

Dear Sir:

Pursuant to 37 C.F.R. § 1.56, §1.97 and §1.98, the Applicants submit for consideration in the above-identified patent application the documents listed on the accompanying Form PTO-1449. The Examiner is requested to make these documents of record.

This Information Disclosure Statement is submitted pursuant to 37 CFR §1.97(b) as it within three months of the filing date of a national application other than a continued prosecution application and/or before the mailing of a first Office Action on the merits. Accordingly, no fee is required.

Applicants would appreciate the Examiner initialing and returning the Form PTO-1449, indicating that the information has been considered and made of record herein.

Applicants also call the Examiner's attention to the following pending U.S. Applications which are related to this application and are listed on the enclosed Form PTO-1449:

Application No. 10/806,775, filed 03/22/2004.

Application No. 11/097,561, filed 03/31/2005.

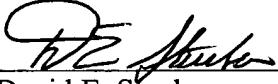
SILICON VALLEY  
PATENT GROUP LLP  
2350 Mission College Blvd.  
Suite 360  
Santa Clara, CA 95054  
(408) 982-8200  
FAX (408) 982-8210

Applicants presume that the Examiner has access to the file histories of the above U.S. applications and hence to the claims and arguments made in support of and against such claims in those applications. If this presumption is incorrect in any respect, the Applicants request the Examiner to so inform them so that the Applicants may submit copies of any materials that are unavailable to the Examiner.

The information contained in this Information Disclosure Statement is to the best of my knowledge and is not to be construed as a representation that: (i) a complete search has been made; (ii) additional information material to the examination of this application does not exist; (iii) the information, protocols, results and the like reported by third parties are accurate or enabling; or (iv) the above information constitutes prior art to the subject invention.

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\_\_\_\_\_  
David E. Steuber

Respectfully submitted,



David E. Steuber  
Attorney for Applicants  
Reg. No. 25,557

SILICON VALLEY  
PATENT GROUP LLP

2350 Mission College Blvd.  
Suite 360  
Santa Clara, CA 95054  
(408) 982-8200  
FAX (408) 982-8210

CL 482 -2-

Application No. 11/097,561

U.S. Department of Commerce, Patent and Trademark Office  INFORMATION DISCLOSURE STATEMENT BY APPLICANT (several sheets if necessary)		Application No.:	11/154,894
		Filing Date:	06/15/2005
		First Named Inventor:	Lawrence G. Hopkins
		Group Art Unit:	3744
		Examiner Name:	Unknown
		Confirmation No.:	2747
		Attorney Docket No.:	HTR007-3C US

U.S. Patent Documents								
*Examiner Initials		Document Number	Date	Name	Class	Subclass	Filing Date if Appropriate	
	1.	4,651,922	04-1987	Noba	236	35		
	2.	4,494,006	01-1985	Staroselsky et al.	290	4		
	3.	4,158,527	06-1979	Burkett	417	18		
	4.	3,332,621	07-1967	Tanner	236	46		
	5.	5,269,660	12-1993	Pradelle	417	18		
	6.	2004-0185771A1	09-2004	Hopkins	415	119		
	7.	2005-0180846A1	08-2005	Hopkins				
Foreign Patent Documents								
							Translation	
		Document	Date	Country	Class	Subclass	Yes	No
Other Art (Including Author, Title, Date, Pertinent Pages, Etc.)								
	8.	AAON worksheet and drawing regarding Borders East Tower job for customer Borders Group, dated 02/26/2001 (2 pages)						
	9.	AAON order form, estimating worksheet, and facsimile transmission regarding The Commons job, dated 09/15/1998, 09/30/1998 and 6/30/1998 (3 pages)						
	10.	AAON wiring diagram assignment and verification regarding Form Show Arena job, 04/01/2002 (1 page)						
	11.	AAON worksheet and drawing regarding Harrison Wills job, both dated 02/26/2002 (2 pages)						
	12.	AAON RL Feature Master Number sheet, dated 10/17/2001 (1 page)						
	13.	Mammouth Selection Guide for Custom Penthouse (200-410 Tons Cooling-only VAV configurations, 1992 (14 pages)						

Examiner:	Date Considered:
* Examiner: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with your communication with applicant.	

STFW

PTO/SB/21 (09-04)

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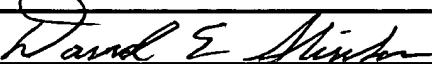
4

Application Number	11/154,894
Filing Date	06/15/2005
First Named Inventor	Lawrence G. Hopkins
Art Unit	3744
Examiner Name	Ninh H. Nyugen
Attorney Docket Number	HTR007-3C US

## ENCLOSURES (Check all that apply)

<input type="checkbox"/> Fee Transmittal Form	<input type="checkbox"/> Drawing(s)	<input type="checkbox"/> After Allowance Communication to TC
<input type="checkbox"/> Fee Attached	<input type="checkbox"/> Licensing-related Papers	<input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences
<input type="checkbox"/> Amendment/Reply	<input type="checkbox"/> Petition	<input type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)
<input type="checkbox"/> After Final	<input type="checkbox"/> Petition to Convert to a Provisional Application	<input type="checkbox"/> Proprietary Information
<input type="checkbox"/> Affidavits/declaration(s)	<input type="checkbox"/> Power of Attorney, Revocation	<input type="checkbox"/> Status Letter
<input type="checkbox"/> Extension of Time Request	<input type="checkbox"/> Change of Correspondence Address	<input checked="" type="checkbox"/> Other Enclosure(s) (please identify below):
<input type="checkbox"/> Express Abandonment Request	<input type="checkbox"/> Terminal Disclaimer	<input type="checkbox"/> Return Postcard
<input checked="" type="checkbox"/> Information Disclosure Statement	<input type="checkbox"/> Request for Refund	
<input type="checkbox"/> Certified Copy of Priority Document(s)	<input type="checkbox"/> CD, Number of CD(s) _____	
<input type="checkbox"/> Reply to Missing Parts/ Incomplete Application	<input type="checkbox"/> Landscape Table on CD	
<input type="checkbox"/> <input type="checkbox"/> Reply to Missing Parts under 37 CFR 1.52 or 1.53		
Remarks		
Please charge any required fee to Deposit Account No. 50-2263		

## SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name	Silicon Valley Patent Group LLP		
Signature			
Printed name	David E. Steuber		
Date	02/22/2006	Reg. No.	25,557

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Typed or printed name	David E. Steuber	Date	02/22/2006

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CL 484



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventors: Lawrence G. Hopkins  
 Assignee: Huntair, Inc.  
 Title: Fan Array Fan Section In Air-Handling Systems  
 Serial No.: 11/154,894 Filing Date: 06/15/2005  
 Examiner: Ninh H. Nguyen Group Art Unit: 3744  
 Docket No.: HTR007-3C US Confirmation No: 2747

Santa Clara, California  
 February 22, 2006

MAIL STOP AMENDMENT  
 COMMISSIONER FOR PATENTS  
 P.O. BOX 1450  
 ALEXANDRIA, VA 22313-1450

**SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT  
 UNDER 37 CFR §1.97(b)**

Dear Sir:

Pursuant to 37 C.F.R. § 1.56, §1.97 and §1.98, the Applicants submit for consideration in the above-identified patent application the documents listed on the accompanying Form PTO-1449. The Examiner is requested to make these documents of record.

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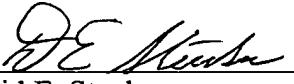
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them so that the Applicants may submit copies of any materials that are unavailable to the Examiner.

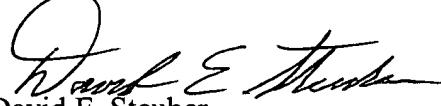
The information contained in this Information Disclosure Statement is to the best of my knowledge and is not to be construed as a representation that: (i) a complete search has been made; (ii) additional information material to the examination of this application does not exist; (iii) the information, protocols, results and the like reported by third parties are accurate or enabling; or (iv) the above information constitutes prior art to the subject invention.

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\_\_\_\_\_  
David E. Steuber

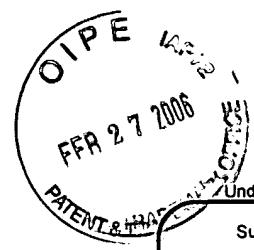
Respectfully submitted,

  
\_\_\_\_\_  
David E. Steuber  
Attorney for Applicants  
Reg. No. 25,557

SILICON VALLEY  
PATENT GROUP LLP  
2350 Mission College Blvd.  
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(408) 982-8200  
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CL 486 -2-

Application No. 11/154,894



PTO/SB/08A (07-05)

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**Substitute for form 1449/PTO**

## **INFORMATION DISCLOSURE STATEMENT BY APPLICANT**

*(Use as many sheets as necessary)*

Sheet 1 of 1

**Complete if Known**

Application Number	11/154,894
Filing Date	06/15/2005
First Named Inventor	Lawrence G. Hopkins
Art Unit	3744
Examiner Name	Ninh H. Nguyen
Attorney Docket Number	HTR007-3C US

## U. S. PATENT DOCUMENTS

## FOREIGN PATENT DOCUMENTS

Examiner Signature		Date Considered	
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**\*EXAMINER:** Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup>Applicant's unique citation designation number (optional). <sup>2</sup>See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup>Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup>For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup>Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup>Applicant is to place a check mark here if English language Translation is attached.

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**EAST Search History**

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S1	221	(415/61).CCLS.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2005/04/19 14:50
S2	225	(416/111).CCLS.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2004/09/09 13:37
S3	202	(416/120).CCLS.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2004/09/09 13:43
S4	330	(415/60).CCLS.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2004/09/09 15:44
S5	3	("5772500"   "6042474"   "6252770").PN.	USPAT	OR	ON	2004/09/09 13:58
S6	18	("2653803"   "2878991"   "2998714"   "3045450"   "3150816"   "3903213"   "4079665"   "4239459"   "4398452"   "4851162"   "5042270"   "5277655"   "5370576"   "5598719"   "5632677"   "5643082"   "5658130"   "5788568").PN.	USPAT	OR	ON	2004/09/09 14:01
S7	4	("4185688"   "4523630"   "5297990"   "5370576").PN.	USPAT	OR	ON	2004/09/09 14:08
S8	7514	fan same array	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/04/20 09:55
S9	1078	(fan same array ) and cool	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2004/09/09 15:44
S10	142	((fan same array ) and cool) and (fan same controller)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2004/09/09 15:53

**EAST Search History**

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S12	6	(("4767262") or ("5370576") or ("6072397")).PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2005/01/24 11:28
S13	14566	fan same air same hand\$3	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2005/04/06 09:19
S14	1091	S13 and controller	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2005/04/06 09:19
S15	164	S14 and array	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2005/04/06 09:19
S16	330	S14 and (array or stack\$3)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2005/04/06 09:20
S17	136	S14 and (fan same (array or stack\$3))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2005/04/06 09:20
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**EAST Search History**

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S24	130	ninh.xa. and fan	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2005/04/06 14:49
S25	0	S24 and "ibm"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2005/04/06 14:48
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**EAST Search History**

S27	15	S24 and array	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2005/04/06 14:49
S28	8	(air adj handler) same (noise or sound)same (suppress\$3 or absorb\$3 or damp\$3)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2005/04/19 14:51
S29	10	("3156233").URPN.	USPAT	OR	ON	2005/04/19 14:51
S30	14429	fan same (array or stack)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/04/20 09:55
S31	4644	S30 and condition and air	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/04/20 09:56
S32	1393	S31 and controller	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/04/20 09:56
S33	1027	S32 and (building or structure)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/04/20 09:56
S34	182	S33 and ((air adj condition\$3) or (air adj handl\$3))	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/04/20 09:57
S35	191	(417/3).CCLS.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2005/04/20 11:10
S36	14	("2537094"   "2669321"   "3140590"   "3216648"   "3420069"   "3435822"   "3851695"   "3889484").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2005/04/20 11:29
S37	141	(417/423.5).CCLS.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2005/04/20 11:29
S38	9	("4767262"   "4789351"   "4931904"   "5484262"   "5788467"   "5927389"   "5949646"   "6011689"   "6234817").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2005/04/20 11:41

**EAST Search History**

S39	366	(417/426).CCLS.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2005/04/20 11:41
S40	37	(("3898019") or ("4241871") or ("4426960") or ("4800653") or ("5136465") or ("5210680") or ("5546272") or ("5572403") or ("5664995") or ("5745041") or ("5787971") or ("5793610") or ("6031717") or ("6386826") or ("6463891") or ("6648590") or ("6675739")).PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2005/08/03 16:21
S41	9	("4443387"   "4476809"   "4509899"   "5658130"   "6059865"   "6257832"   "6276900"   "6293121"   "6588372").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2005/08/03 16:28
S42	24099	(fan or blower) same (multiple or plurality) same control	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2005/08/04 08:26
S43	966	S42 and "ON" and "OFF"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2005/08/04 08:26
S44	292	S43 and (control same "ON" same "OFF")	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2005/08/04 08:53
S45	26	S44 and (fan same (row or array))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2005/08/04 08:27
S46	98	S44 and cool	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2005/08/04 09:03
S47	14930	(fan or blower) same cool same control	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2005/08/04 09:04

**EAST Search History**

S48	197	S47 and (fan same array)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2005/08/04 09:04
S49	16	("3630003"   "4426960"   "4489680"   "4499865"   "4539942"   "4590772"   "4651922"   "4698761"   "4726325"   "4765284"   "4977862"   "5046550"   "5441099"   "6076488"   "6178928"   "6216778").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2005/08/04 10:10
S50	1270	"HVAC" and (fan or blower) and controller	US-PGPUB; USPAT; USOCR	OR	ON	2005/08/04 10:10
S51	324	S50 and array	US-PGPUB; USPAT; USOCR	OR	ON	2005/08/04 10:12
S52	7	S51 and rooftop	US-PGPUB; USPAT; USOCR	OR	ON	2005/08/04 10:11
S53	0	(fan same array)and controll and efficiency and program	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2005/12/01 08:24
S54	0	(fan same array)and controll and efficiency and program	US-PGPUB	OR	ON	2005/12/01 08:23
S55	0	(fan same array)and controll and efficiency	US-PGPUB	OR	ON	2005/12/01 08:23
S56	0	(fan same array)and controll	US-PGPUB	OR	ON	2005/12/01 08:24
S57	43004	fan	US-PGPUB	OR	ON	2005/12/01 08:24
S58	2192	S57 same array	US-PGPUB	OR	ON	2005/12/01 08:24
S59	1677	S58 and control	US-PGPUB	OR	ON	2005/12/01 08:24
S60	755	(fan same array)and control and efficiency and program	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2005/12/01 08:24
S61	49	S60 and (air same hand\$3)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2005/12/01 08:25

**EAST Search History**

S62	0	S61 and (on same off)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2005/12/01 08:26
S63	29	S61 and (compartment or chamber)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2005/12/01 08:26
S64	10	(("4,494,006") or ("5,269,660") or ("4,158,527") or ("3,332,621")).PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/01/23 13:55
S65	36074	fan and array	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/01/18 13:53
S66	1426065	controller	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/01/18 13:53
S67	7481	S66 and "on" and "off"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/01/18 13:54
S68	98	S65 and S67	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/01/18 13:55
S69	644	fan same "on" same "off"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/01/18 13:56

**EAST Search History**

S70	33	S69 and controller	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/01/18 14:46
S71	2	S70 and array	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/01/18 13:56
S72	74190	fan same (multiple or plurality)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/01/18 14:46
S73	45779	S72 and control\$4	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/01/18 16:15
S74	8216748	control\$3 or energi\$3 or deenergi\$3	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/01/18 16:17
S75	45612	S72 and S74	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/01/18 16:18
S76	6775	S75 and array	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/01/18 16:19
S77	22	S76 and ("on" same "off")	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/01/18 16:19

**EAST Search History**

S78	15222	fan same energi\$3	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/01/18 16:46
S79	2439	S78 and S66	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/01/18 16:46
S80	827	S79 and efficiency	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/01/18 16:46
S81	289	S80 and (fan same multiple or plural or array)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/01/18 16:46
S82	3	("4967155"   "5773755"   "6646877").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2006/01/19 08:41
S83	6	("2927736"   "4495545"   "4817912"   "5491610"   "5544012").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2006/01/19 08:48
S84	45	("3685355"   "3733900"   "4052897"   "4186655"   "4257318"   "4392417"   "4407185"   "4428529"   "4437608"   "4441651"   "4487363"   "4530395"   "4549601"   "4559835"   "4630670"   "4646964"   "4705457"   "4836095"   "4836096"   "4850264"   "4862052"   "4916370"   "4921164"   "4931948"   "4947928"   "4978896"   "4978897"   "4995307"   "5005636"   "5019757"   "5103391"   "5179524"   "5279609"   "5292280"   "5404934"   "5418438"   "5538471"   "5540555"   "5540619"   "5544697"   "5573181"   "5592059"   "5597354"   "5687052"   "Re28946").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2006/01/19 09:53

**EAST Search History**

S85	4	(fan and array and plurality and compartment and efficiency and operat\$3 and controller and peak and strategic\$3)	US-PGPUB	OR	ON	2006/01/23 14:01
S86	1	("6792766").URPN.	USPAT	OR	ON	2006/03/02 14:14
S87	8	("3628600"   "4559788"   "4683942"   "4843832"   "4959970"   "5701750"   "6298677"   "6467537").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2006/03/02 14:14
S88	8	("3628600"   "4559788"   "4683942"   "4843832"   "4959970"   "5701750"   "6298677"   "6467537").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2006/03/02 14:16
S89	4	("4259847"   "4501125"   "4830274"   "5181653").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2006/03/02 14:16
S90	4	("1956707"   "3653590"   "4021213").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2006/03/02 14:17
S91	4	("3530683"   "3747361"   "3877243").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2006/03/02 14:19
S92	6	("3332621"   "5484012"   "5726874"   "6247898"   "6259172").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2006/03/02 14:29
S93	11	("6398505").URPN.	USPAT	OR	ON	2006/03/02 14:30



## UNITED STATES PATENT AND TRADEMARK OFFICE

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/154,894	06/15/2005	Lawrence G. Hopkins	HTR007-3C US	2747
34036	7590	03/08/2006	EXAMINER	
SILICON VALLEY PATENT GROUP LLP			NGUYEN, NINH H	
2350 MISSION COLLEGE BOULEVARD				
SUITE 360			ART UNIT	PAPER NUMBER
SANTA CLARA, CA 95054			3745	

DATE MAILED: 03/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	11/154,894	HOPKINS, LAWRENCE G.
	<b>Examiner</b>	<b>Art Unit</b>
	Ninh H. Nguyen	3745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) Responsive to communication(s) filed on \_\_\_\_.  
 2a) This action is **FINAL**.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) Claim(s) 1-20 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_ is/are allowed.  
 6) Claim(s) 1-20 is/are rejected.  
 7) Claim(s) \_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 15 June 2005 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
 Paper No(s)/Mail Date 06/15/05, 01/17/06.
- 4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_.  
 5) Notice of Informal Patent Application (PTO-152)  
 6) Other: \_\_\_\_.

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## DETAILED ACTION

### ***Double Patenting***

1. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

2. Claims 1, 12, and 16 are provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 5, 1, and 31 of copending Application No. 10/806,775. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

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4. Claims [1], [2], [3], [4], [5], [7], [8], [9], [10], [11], [13], [14], [15], [16], [17], [18], [19], and [20] are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims [1, 31], [1], [2], [3], [4], [7], [8], [9], [10], [21], [25], [27], [29], [1, 32], [32], [1, 43], [25], and [29], respectively of copending Application No. 10/806,775. Although the conflicting claims are not identical, they are not patentably distinct from each other because claims [1, 31], [1], [2], [3], [4], [7], [8], [9], [10], [21], [25], [27], [29], [1, 32], [32], [1, 43], [25], and [29] of the copending '775 patent application "anticipates" application claims [1], [2], [3], [4], [5], [7], [8], [9], [10], [11], [13], [14], [15], [16], [17], [18], [19], and [20]. Accordingly, application claims [1], [2], [3], [4], [5], [7], [8], [9], [10], [11], [13], [14], [15], [16], [17], [18], [19], and [20] is not patentably distinct from the copending '775 patent application claim [1, 31], [1], [2], [3], [4], [7], [8], [9], [10], [21], [25], [27], [29], [1, 32], [32], [1, 43], [25], and [29]. Here, copending '775 application claim 1 requires (A) at least six fan units (B) arranged in a fan array, (C) the fan array is positioned in an air-handling compartment; and (D) an array controller; while application claim 1 only requires elements (A), (B), (C) and (E) the air-handling compartment is positionable within a structure to condition the air of the structure. It appears that the fan array fan section of claim 1 of the copending '775 application inherently can be positioned within a structure to condition the air of that structure. Thus it is apparent that the more specific copending '775 application claim 1 encompasses application claim 1. Following the rationale in *In re Goodman* cited in the preceding paragraph, where applicant has once been granted a patent containing a claim for the specific or narrower invention, applicant may not then obtain a second patent with a claim for the generic or broader invention without first submitting an appropriate terminal disclaimer. Note that since

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Application claim 1 is anticipated by copending '775 application claim 1 and since anticipation is the epitome of obviousness, then Application claim 1 is obvious over copending '775 application claim 1.

This is a provisional obviousness-type double patenting rejection.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-3, 5, 6, 9, and 14-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Ray (5,701,750).

Ray discloses a fan array fan section in an air-handling system (Figs. 1-5) comprising an air-handling compartment 22 (Fig. 1); a plurality of fan units 1-4; the plurality of fan units arranged in a fan array (Fig. 1); the fan array having at least one fan unit arranged vertically on at least one other fan unit; the fan array positioned within the air-handling compartment; and the air-handling compartment positionable within a structure such that the air-handling system conditions the air of the structure (Fig. 1);

wherein the fan array fan section further comprises an array controller to inherently operate the plurality of fan units at peak efficiency by strategically turning on and off selective ones of the plurality of fan units;

wherein the plurality of fan units are arranged in a true array configuration (Fig. 1);

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wherein each of the plurality of fan units is inherently mounted in a grid system (Fig. 1); wherein the fan array fan section further comprising an array controller for controlling the plurality of fan units, the array controller is inherently operates the fan units at a stable operating point and eliminate the surge effects;

wherein the fan array fan section further comprising an array controller for controlling the plurality of fan units, the array controller inherently controls the speed of each of the plurality of fan units to run at substantially peak efficiency;

wherein the fan array fan section further comprising an array controller for operating the plurality of fan units at peak efficiency by strategically turning on and off selective ones of the plurality of fan units.

7. Claims 1-3, 5, 9, and 14-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Neidhardt et al. (4,021,213).

Neidhardt discloses a fan array fan section in an air-handling system (Figs. 1-4) comprising an air-handling compartment 22 (Fig. 2); a plurality of fan units; the plurality of fan units arranged in a fan array (Fig. 21); the fan array having at least one fan unit arranged vertically on at least one other fan unit; the fan array positioned within the air-handling compartment; and the air-handling compartment positionable within a structure 12 such that the air-handling system conditions the air of the structure (Fig. 1);

wherein the fan array fan section further comprises an array controller to inherently operate the plurality of fan units at peak efficiency by strategically turning on and off selective ones of the plurality of fan units (Fig. 4; col. 4, lines 63-67);

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wherein the plurality of fan units are arranged in a true array configuration (Fig. 1);  
wherein each of the plurality of fan units is mounted in a grid system (Fig. 1);  
wherein the fan array fan section further comprising an array controller (Fig. 4) for  
controlling the plurality of fan units, the array controller is inherently operates the fan units at a  
stable operating point and eliminate the surge effects;

wherein the fan array fan section further comprising an array controller (Fig. 4) for  
controlling the plurality of fan units, the array controller inherently controls the speed of each of  
the plurality of fan units to run at substantially peak efficiency;

wherein the fan array fan section further comprising an array controller (Fig. 4) for  
operating the plurality of fan units by strategically turning on and off selective ones of the  
plurality of fan units (col. 4, lines 63-67) .

8. Claims 1 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Krofchalk  
(5,370,576).

Krofchalk discloses a fan array fan section in an air-handling system (Figs. 1-5)  
comprising an air-handling compartment 18 (Fig.5); a plurality of fan units; the plurality of fan  
units arranged in a fan array (Fig. 5); the fan array having at least one fan unit arranged vertically  
on at least one other fan unit; the fan array positioned within the air-handling compartment; and  
the air-handling compartment positionable within a structure (col. 2, lines 12-18) such that the  
air-handling system conditions the air of the structure (Fig. 5);

wherein each of the plurality of fan units has a fan wheel diameter, wherein spacing  
between the plurality of fan units is less than 60% of the fan wheel diameter (Fig. 5).

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***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ray.

Ray discloses all the limitations except an airway path of less than 72 inches as claimed.

Since the applicant has not disclosed that having an airway path of less than 72 inches solves any stated problem or is for any particular purpose above the fact that an airway path is required for the fan array fan section to function properly ,and it appears that the airway path of the fan array fan system of Ray would perform equally well with the dimensions as defined claimed by applicant, it would have been an obvious matter of design choice to modify the airway path of the fan array fan system of Ray by utilizing the specific dimensions as claimed.

11. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ray in view of O'connell (3,156,233).

Ray discloses all the limitations except the each of the plurality of fan units is not positioned within a fan unit chamber having at least one acoustically absorptive insulation surface as claimed.

O'connell teaches an air handling apparatus comprising a fan chamber 14, a fan 20 and a motor 26; wherein the fan chamber comprising a layer of filter medium 37 to provide sealing, vibration absorption and sound attenuation (col. 2, lines 5-11).

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It would have been obvious for a person having ordinary skill in the art at the time of the invention was made to make the fan array fan section of Ray with a layer of filter material for the purpose of providing sealing, vibration absorption and sound attenuation as taught by O'connell.

12. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Krofchalk.

Krofchalk discloses all the limitations including a back draft dampener 28 (Fig. 5) for both fan units. However, Krofchalk does not disclose an array of backdraft dampeners wherein each backdraft dampener in line with a respective fan unit as claimed.

It would have been obvious for a person having ordinary skill in the art at the time of the invention was made to make the fan array fan section of Krofchalk with an array of backdraft dampeners wherein each backdraft dampener in line with a respective fan unit as an expedience for providing backdraft dampener for the fans.

*Prior Art*

The prior art made of record but not relied upon is considered pertinent to applicant's disclosure and consists of 1 patent.

Osborne et al. (6,792,766) is cited to show a fan array configuration.

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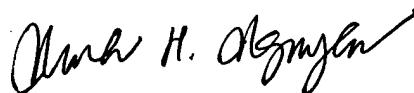
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***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Ninh Nguyen whose telephone number is (571) 272-4823. The examiner can be normally reached on Monday-Friday from 7:30 A.M. to 5:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Look, can be reached at (571) 272-4820. The fax number for this group is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, please go to <http://pair-direct.uspto.gov> or contact the Electronic Business center (EBC) at 866-217-9197 (toll-free).



NINH H. NGUYEN  
PRIMARY EXAMINER

Nhn  
March 6, 2006

CL 507

<b>Notice of References Cited</b>		Application/Control No.	Applicant(s)/Patent Under Reexamination	
		11/154,894	HOPKINS, LAWRENCE G.	
		Examiner	Art Unit	Page 1 of 1
		Ninh H. Nguyen	3745	

**U.S. PATENT DOCUMENTS**

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-4,021,213	05-1977	Neidhardt et al.	62/180
*	B	US-5,701,750	12-1997	Ray, Robert W.	62/160
*	C	US-3,156,233	11-1964	O'CONNELL ALVA D	126/110R
*	D	US-6,792,766	09-2004	Osborne et al.	62/159
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

**FOREIGN PATENT DOCUMENTS**

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

**NON-PATENT DOCUMENTS**

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

\*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)  
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Sheet 1 of 1

<p>U.S. Department of Commerce, Patent and Trademark Office</p> <p>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</p> <p>(ATTACH &amp; FILE several sheets if necessary)</p>	Application No.:	11/154,894
	Filing Date:	06/15/2005
	First Named Inventor:	Lawrence G. Hopkins
	Group Art Unit:	3744 3745
	Examiner Name:	Unknown N. NGUYEN
	Confirmation No.:	2747
	Attorney Docket No.:	HTR007-3C US

U.S. Patent Documents							
*Examiner Initials		Document Number	Date	Name	Class	Subclass	Filing Date if Appropriate
<i>John</i>	1.	4,651,922	04-1987	Noba	236	35	
	2.	4,494,006	01-1985	Staroselsky et al.	290	4	
	3.	4,158,527	06-1979	Burkett	417	18	
	4.	3,332,621	07-1967	Tanner	236	46	
	5.	5,269,660	12-1993	Pradelle	417	18	
	6.	2004-0185771A1	09-2004	Hopkins	415	119	
<i>John</i>	7.	2005-0180846A1	08-2005	Hopkins			

Foreign Patent Documents								
							Translation	
		Document	Date	Country	Class	Subclass	Yes	No

Other Art (Including Author, Title, Date, Pertinent Pages, Etc.)							
<i>John</i>	8.	AAON worksheet and drawing regarding Borders East Tower job for customer Borders Group, dated 02/26/2001 (2 pages)					
	9.	AAON order form, estimating worksheet, and facsimile transmission regarding The Commons job, dated 09/15/1998, 09/30/1998 and 6/30/1998 (3 pages)					
	10.	AAON wiring diagram assignment and verification regarding Form Show Arena job, 04/01/2002 (1 page)					
	11.	AAON worksheet and drawing regarding Harrison Wills job, both dated 02/26/2002 (2 pages)					
	12.	AAON RL Feature Master Number sheet, dated 10/17/2001 (1 page)					
<i>John</i>	13.	Mammouth Selection Guide for Custom Penthouse (200-410 Tons Cooling-only VAV configurations, 1992 (14 pages)					

Examiner:	<i>John H. Nguyen</i>	Date Considered:	03/06/06
* Examiner: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with your communication with applicant.			

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First Named Inventor	Hopkins
Art Unit	3745
Examiner Name	N. NGUYEN

Attorney Docket Number

Hunt:FanArr3

## U. S. PATENT DOCUMENTS

Examiner Initials*	Cite No. <sup>1</sup>	Document Number Number-Kind Code <sup>2</sup> ( <i>if known</i> )	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		US- 3898019	08-05-1975	Reznick et al.	
		US- 4241871	12-30-1980	Newell, III et al.	
		US- 4426960	01-24-1984	Hart	
		US- 4800653	01-31-1989	Steffen	
		US- 5136465	08-04-1992	Benck et al.	
		US- 5210680	05-11-1993	Scheibler	
		US- 5546272	08-13-1996	Moss et al.	
		US- 5572403	11-05-1996	Mills	
		US- 5664995	09-09-1997	O'Keefe	
		US- 5745041	04-28-1998	Moss	
		US- 5787971	08-04-1998	Dodson	
		US- 5793610	08-11-1998	Schmitt et al.	
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		US- 6386826 B1	05-14-2002	Jacob	
		US- 6463891 B2	10-15-2002	Algrain et al.	
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		US- 6,675,739 B2	01-13-2004	Terrell et al.	

## FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document Country Code <sup>3</sup> Number <sup>4</sup> Kind Code <sup>5</sup> ( <i>if known</i> )	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
		EP 0205979 A1	12-30-1986	Mizutani et al.		

Examiner Signature

*Minh H. Nguyen*

Date Considered

03/06/06

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Application Number	11/154,894
Filing Date	June 15, 2005
First Named Inventor	Hopkins
Art Unit	3745
Examiner Name	N. NGUYEN

Attorney Docket Number

Hunt:FanArr3

## U. S. PATENT DOCUMENTS

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		Number-Kind Code <sup>2</sup> (if known)			
AN		US- 4767262	08-30-1988	Simon	
		US- 4133374	01-09-1979	York	
		US- 5632677	05-27-1997	Elkins	
		US- 6155335	12-05-2000	Acre et al.	
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		US- 6414845 B2	07-02-2002	Bonet	
		US- 6427455 B1	08-06-2002	Furubayashi	
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AN		US- 6072397	06-06-2000	Ostrowski	
		US-			

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Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
		Country Code <sup>3</sup> Number <sup>4</sup> Kind Code <sup>5</sup> (if known)				

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(Use as many sheets as necessary)				Filing Date	June 15, 2005
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				Art Unit	3745
				Examiner Name	N. NGUYEN
				Attorney Docket Number	Hunt:FanArr3

NON PATENT LITERATURE DOCUMENTS				
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<i>ANH</i>		The Parallel and Series Operation, Sunon Group web page, <a href="http://www.sunon.com/english/wealth/tech/tech-06.htm">http://www.sunon.com/english/wealth/tech/tech-06.htm</a> , at least as early as March 15, 2004, 2 pages, Sunon Group, Taiwan.		
		Series and Parallel Fans, HighBeam Research web page, <a href="http://www.static.highbeam.com/m/machinedesign/january261995/seriesandparallelfans/index.htm">www.static.highbeam.com/m/machinedesign/january261995/seriesandparallelfans/index.htm</a> , January 26, 1995, 1 page, HighBeam Research, LLC.		
		MCLEOD, IAN, Using Fans in Series and Parallel: Performance Guidelines, ebmpapst web page, <a href="http://www.pepstplc.com/features/articles/art006&amp;print=true">http://www.pepstplc.com/features/articles/art006&amp;print=true</a> , at least as early as March 15, 2004, 3 pages, amb-Papst Automotive and Drives (UK) Ltd., UK.		
		Technical Bulletin: CLEANPAK M/R/PF Multi/Redundant/Plenum Fan, at least as early as March 15, 2004, 3 pages, CLEANPAK International, Clackamas, Oregon.		
		Installation Operating and Maintenance Manual, 2003, 12 pages, Greenheck Fan Corp., Schofield, Wisconsin.		
		DPL Series - Delhi Plenum Fan: Installation and Maintenance Instructions, November 2001, 2 pages, Delhi Industries Inc., Delhi, Ontario, Canada.		
		AAON, RL Series Rooftop Conditioners, 09/01, 12 pages		
		Jim Parro (Marketing Manager for AAON) New Promotional Literature The RL Series, 1 page		
		AAON, RL Series 45 to 230 tons Packaged Rooftop Conditioners & Air Handlers		
<i>ANH</i>		AAON, Invoice No. 265184, 2/28/02, 1 page.		

Examiner Signature	<i>Minh A. Nguyen</i>	Date Considered	03/06/06
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Sheet	4	of	4		

Examiner Signature		Date Considered	03/06/06
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<b>Search Notes</b> 				Application/Control No.	Applicant(s)/Patent under Reexamination	
				11/154,894	HOPKINS, LAWRENCE G.	
				Examiner	Art Unit	
				Ninh H. Nguyen	3745	
<b>SEARCHED</b>				<b>SEARCH NOTES (INCLUDING SEARCH STRATEGY)</b>		
Class	Subclass	Date	Examiner		DATE	EXMR
415	60, 61	3/6/2006	NHN	East search	3/6/2006	NHN
	108, 177					
	119					
416	120					
417	3, 423.5					
	426					
454	338					
<b>INTERFERENCE SEARCHED</b>						
Class	Subclass	Date	Examiner			



**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
PATENT APPLICATION EXAMINING OPERATIONS**

Appl. No. : 11/154,894 Confirmation No. 2747  
Applicant : Hopkins, Lawrence G.  
Filed : 06/15/2005  
TC/A.U. : 3744  
Examiner : Nguyen, Nihn H.  
Docket No. : 8887.9999  
Customer No. : 0152

**AMENDMENT**

1600 ODS Tower  
601 S.W. Second Avenue  
Portland, OR 97204

September 8, 2006

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

In response to the Office Action dated March 8, 2006, please amend the above-identified application as follows:

**Amendments to the Claims** are reflected in the listing of claims which begins on page 2 of this paper.

**Remarks/Arguments** being on page 6 of this paper.

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 Amdt. dated September 8, 2006  
 Reply to Office action of March 8, 2006

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (currently amended) A fan array fan section in an air-handling system comprising:
  - (a) an air-handling compartment;
  - (b) a plurality of fan units;
  - (c) said plurality of fan units arranged in a fan array;
  - (d) ~~said fan array having at least one fan unit arranged vertically on at least one other fan unit;~~
  - (e) ~~(d)~~ said fan array positioned within said air-handling compartment; and
  - (f) ~~(e)~~ said air-handling compartment ~~positionable within~~ ~~associated with~~ a structure such that said air-handling system conditions the air of said structure; and
  - (g) ~~(f)~~ ~~a control system for operating said plurality of fan units at substantially peak efficiency by strategically turning on and off selective ones of said plurality of fan units.~~
2. (currently amended) The fan array section in an air handling system of claim 1, ~~further comprising an, wherein said control system comprises a programmable array controller programmed to operate said plurality of fan units at peak efficiency by strategically turning on and off said selective ones of said plurality of fan units.~~
3. (original) The fan array fan section in an air-handling system of claim 1, wherein said plurality of fan units are plenum fans.
4. (original) The fan array fan section in an air-handling system of claim 1, wherein said air-handling compartment has an airway path, said airway path being less than 72 inches.
5. (original) The fan array fan section in an air-handling system of claim 1, wherein said plurality of fan units are arranged in a fan array configuration selected from the group consisting of:
  - (a) a true array configuration;
  - (b) a spaced pattern array configuration;
  - (c) a checker board array configuration;

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- (d) rows slightly offset array configuration;
  - (e) columns slightly offset array configuration; and
  - (f) a staggered array configuration.
6. (original) The fan array fan section in an air-handling system of claim 1, wherein each of said plurality of fan units is positioned within a fan unit chamber.
  7. (original) The fan array fan section in an air-handling system of claim 1, wherein each of said plurality of fan units is suspended within a respective said fan unit chamber such that there is an air relief passage therebelow.
  8. (original) The fan array section in an air-handling system of claim 1, wherein each of said plurality of fan units is positioned within a fan unit chamber having at least one acoustically absorptive insulation surface.
  9. (original) The fan array fan section in an air-handling system of claim 1, wherein each of said plurality of fan units is mounted in a grid system.
  10. (original) The fan array fan section in an air-handling system of claim 1, wherein each of said plurality of fan units has a fan wheel diameter, wherein spacing between said plurality of fan units is less than 60% of said fan wheel diameter.
  11. (original) The fan array fan section in an air-handling system of claim 1, further comprising an array controller 2, wherein each fan unit has a peak efficiency operating range outside of which it operates at a reduced efficiency, wherein said array controller is programmed to operate said plurality of fan units at substantially peak efficiency by strategically turning off at least one fan unit operating at reduced efficiency and running the remaining fan units within said peak efficiency operating range.
  12. (currently amended) The fan array fan section in an air-handling system of claim 1, ~~further comprising an array controller 2, wherein each fan unit has a peak efficiency operating range outside of which it operates at a reduced efficiency, wherein said array controller is programmed to operate said plurality of fan units at substantially peak efficiency by strategically turning off at least one fan unit operating at reduced efficiency and running the remaining fan units within said peak efficiency operating range.~~
  13. (currently amended) The fan array fan section in an air-handling system of claim 1, ~~further comprising an array controller for controlling said plurality of fan units to run at substantially peak efficiency by strategically turning selective ones of said plurality of fan units on and off 2, where said array controller is programmed to operate said plurality of fan units at peak efficiency for a performance level based on a criterion criteria selected from the following group of criteria:~~
  - (a) air volume;
  - (b) level of air flow;
  - (c) pattern of air flow; and

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- (d) number of fan units to operate.
14. (currently amended) The fan array fan section in an air-handling system of claim 1, ~~further comprising an array controller for controlling said plurality of fan units 2, wherein~~ said array controller is programmed to operate said plurality of fan units to produce a stable operating point and eliminate the surge effects.
15. (currently amended) ~~A~~ The fan array fan section in an air-handling system of claim 1, ~~further comprising:~~
- (a) an air-handling compartment;
  - (b) a plurality of fan units;
  - (c) said plurality of fan units arranged in a fan array;
  - (d) said fan array positioned within said air-handling compartment;
  - (e) said air-handling compartment association with a structure such that the said air-handling system conditions the air of said structure; and
  - (f) ~~an array controller a control system for controlling said plurality of fan units, said array controller is programmed to selectively control control system allowing control of the speed of each of the fan units in said plurality of fan units to such that they run at substantially peak efficiency.~~
16. (canceled)
17. (canceled)
18. (currently amended) The fan array fan section in an air-handling system of claim 21 1, ~~further comprising an array controller, wherein each fan unit has a peak efficiency operating range outside of which it operates at a reduced efficiency, wherein said array controller is programmed to operate said plurality of fan units at substantially peak efficiency by strategically turning off at least one fan unit operating at reduced efficiency and running the remaining fan units within said peak efficiency operating range.~~
19. (currently amended) The fan array fan section in an air-handling system of claim 21 1, ~~further comprising an array controller for controlling said plurality of fan units to run at substantially peak efficiency by strategically turning selective ones of said plurality of fan units on and off, wherein said array controller is programmed to operate said plurality of fan units at peak efficiency for a performance level based on a criterion criteria selected from the following group of criteria:~~
- (a) air volume;
  - (b) level of air flow;

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- (c) pattern of air flow; and
  - (d) number of fan units to operate.
20. (currently amended) A ~~The~~ fan array fan section in an air-handling system of claim 1, further comprising:
- (a) an air-handling compartment;
  - (b) a plurality of independently controllable fan units;
  - (c) said plurality of fan units arranged in a fan array;
  - (d) said fan array positioned within said air-handling compartment;
  - (e) said air-handling compartment associated with a structure such that said air-handling system conditions the air of said structure; and
  - (f) ~~an array controller a control system for controlling said plurality of fan units, said array controller is programmed to selectively control the speed of each of the fan units in said plurality of fan units to such that they run at substantially peak efficiency.~~
21. (new) The fan array section in an air-bundling system of claim 15 wherein said control system comprises a programmable array controller.

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**Remarks/Arguments:**

Claims 1-20 were pending all of which stand rejected. Claims 1, 2, 12-15 and 18-20 have been amended, and new claim 21 has been added. Claims 16 and 17 have been canceled.

**Statutory Double Patenting Rejections**

Claims 1, 12 and 16 were provisionally rejected under 35 U.S.C. 101 as claiming the same invention as Claims 5, 1 and 31 of co-pending Application No. 10/806,775.

Claim 1 of Application No. 10/806,775 recites “said at least six fan units.” Claim 5 of Application No. 10/806,775 depend from Claim 1. Neither Claim 1 nor Claim 12 of this application recites “at least six fan units.” Thus, neither Claim 1 nor Claim 12 of this application is drawn to the “same invention” as Claims 5 and 1 of Application No. 10/806,775. Claim 16 has been canceled.

**Nonstatutory Double Patenting Rejections**

Claims [1], [2], [3], [4], [5], [7], [8], [9], [10], [11], [13], [14], [15], [16], [17], [18], [19], and [20] were provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over Claims [1,31], [1], [2], [3], [4], [7], [8], [9], [10], [21], [25], [27], [29], [1,32], [32], [1,43], [25], and [29] of co-pending Application No. 10/806,775.

Without conceding the validity of this obviousness-type double patenting rejection, the Applicants have elected to circumvent the rejection by filing a terminal disclaimer with respect to Application No. 10/806,775. The terminal disclaimer, executed by the undersigned, is enclosed.

**Claim Rejections- 35 U.S.C. §102**

Claims 1-3, 5, 6, 9 and 14-17 were rejected under 35 U.S.C. §102(b) as being anticipated by Ray. Claim 1 has been amended to replace the phrase “array controller programmed to operate” with the phrase “control system for operating.” The new phrase is broader than the former phrase. Support for this is found in the first paragraph of page 12 of the specification, and particularly at line 6. Claim 1 was also amended to remove subparagraph (d), and to change the phrase “positionable within” to the phrase “associated with” in subparagraph (f). As will be explained below, patentability of claim 1 does not require these limitations. Finally claim 1 has been amended to add the limitation of a “control system for operating said plurality of fan units at substantially peak efficiency by strategically turning on and off selective ones of said plurality of fan units.” Thus claim 1 now includes substantially the limitations that were in original claim 2 but directed to a “control system” rather than an “array controller.”

In rejecting Claim 2, the Examiner stated that in Ray “the fan array fan section further comprises an array controller to inherently operate the plurality of fan units at peak efficiency by strategically turning on and off selective ones of the plurality of fan units.” The Examiner did not cite any particular passage of Ray in support of this rejection.

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 Amdt. dated September 8, 2006  
 Reply to Office action of March 8, 2006

Upon examination, it is clear that Ray does not teach any means to operate a plurality of fan units at substantially peak efficiency by strategically turning on and off selective ones of the fan units.” Instead, Ray teaches “electronic control circuitry...which causes each of the air supply blowers 1-4 to be operated independently *according to demand as controlled by the respective thermostats*” (col. 4, lines 36-39) (emphasis added). For example, “[w]hen the heat input to zone 4 increases to a predetermined level the thermostat 18 will activate the blower for zone 4, thereby directing air from the conditioned air chamber 24 via conduit 34 into that particular zone” (col. 5, lines 34-38). Turning selective blowers on and off in Ray does not allow operating the plurality of blowers at substantially peak efficiency as is specified in amended claim 1.

Thus, Applicants respectfully submit that Claim 1, as amended, is patentable over Ray. Reconsideration and withdrawal of this rejection is respectfully requested. Claims 2-14 depend from Claim 1 and are likewise patentable for at least this reason.

Claim 15 has been amended in substantially the same manner as claim 1 except that the control system controls the speed of individual fans, rather than turning individual fans off, to cause the plurality of fans to run at substantially peak efficiency. In rejecting Claim 15, the Examiner stated that in Ray “the array controller inherently controls the speed of each of the plurality of fan units to run at substantially peak efficiency.” Again, the Examiner did not cite any particular passage of Ray as supporting this rejection.

Ray states that “[t]he return air blower 60 will typically have multiple blower speeds so that the velocity of return air flow through the heat exchange coils can be varied according to the demands of the various zones of the building structure” (col. 5, lines 18-21). As shown in Fig. 2, the return air blower 60 is not a part of the array of fan units 1-4, so this portion of Ray is inapplicable to Claim 15, which recites “said plurality of fan units arranged in a fan array.” Return air blower 60 of Ray does not appear to be in an array. Moreover, the above-quoted passage of Ray states that the speed of return air blower 60 is “varied according to the demands of the various zones of the building structure.” There is no indication that the speed of return air blower 60 is varied to cause it “to run at substantially peak efficiency.”

Ray also teaches “controlling the speed of the thermal zone blower 102 responsive to the temperature that is sensed within the thermal zone within which the thermostat 80 is located” (col. 6, lines 13-16). “During normal heat load within the thermal zone the low range sensor of the thermostat provides a control signal...which...operat[es] the blower at its low speed setting” (col. 6, lines 16-22). “When the thermostat is set for its ‘cool’ mode and the temperature within the thermal zone of thermostat 80 rises because the heat load is sufficient to overcome low range cooling...high range control signals” are generated to “provide an increased velocity flow of air...to the particular thermal zone to which the zone supply blower is connected for air supply thereto” (col. 6, lines 28-38). In short, there is no indication in Ray that the speed of thermal zone blower 120 is varied to cause it “to run at substantially peak efficiency.”

Thus, Applicants respectfully submit that Claim 15 is patentable over Ray. Reconsideration and withdrawal of this rejection is respectfully requested.

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 Amdt. dated September 8, 2006  
 Reply to Office action of March 8, 2006

Claims 16 and 17 have been canceled.

Claims 1-3, 5, 6, 9 and 14-17 were also rejected under 35 U.S.C §102(b) as being anticipated by Neidhardt et al. The Examiner stated that in Neidhardt et al. “the fan array fan section further comprises an array controller to inherently operate the plurality of fan units at peak efficiency by strategically turning on and off selective ones of the plurality of fan units (Fig. 4; col. 4, lines 63-67).

At col. 4, lines 63-67, Neidhardt et al. state as follows:

By maintaining the operating fans on, either the inboard fan only or both the inboard and outboard fans, during the cycled interruption of the compressor, frost accumulation on the coil is quickly driven off.

The reference to “the coil” in this passage is apparently intended to refer to evaporator coil 38, shown in Fig. 4 (see col. 4, lines 3, 56). In any case, there is absolutely no teaching in the cited portion (or anywhere else) in Neidhardt et al. of a control system for operating a plurality of the fan units at substantially peak efficiency by strategically turning on and off selective ones of said plurality of fan units,” as recited in amended Claim 1.

Thus, Applicants respectfully submit that Claim 1 is patentable over Neidhardt et al. Reconsideration and withdrawal of this rejection is respectfully requested. Claims 2-14 depend from Claim 1 and are, therefore, likewise patentable for at least this reason.

Claim 15 now recites “a control system for controlling said plurality of fan units, said control system allowing control of the speed of the fan units in said plurality of fan units such that they run at substantially peak efficiency.” In rejecting Claim 15, the Examiner stated that in Neidhardt et al. “the array controller inherently controls the speed of each of the plurality of fan units such that they run at substantially peak efficiency.” The Examiner cited Fig. 4 of Neidhardt et al in support of this rejection. The Applicants have carefully reviewed Fig. 4 and the accompanying description in Neidhardt et al. (col. 3, line 8, to col. 5, line 31) and can find absolutely no teaching or suggestion of an “array controller being programmed to selectively control the speed of each of said plurality of fan units to run at substantially peak efficiency.” Nor is any such feature “inherent” in the controller described by Neidhardt et al.

Thus, Applicants respectfully submit that Claim 15 is patentable over Neidhardt et al. Reconsideration and withdrawal of this rejection is respectfully requested.

Claims 1 and 10 were rejected under 35 U.S.C. §102(b) as being anticipated by Krofchalk.

As noted above, the limitation of Claim 2 has substantially been incorporated into Claim 1. Claim 2 was not rejected on the basis of Krofchalk, and therefore Claim 1, as amended, is allowable over Krofchalk. Claim 10 depends from Claim 1 and is therefore also allowable.

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 Amdt. dated September 8, 2006  
 Reply to Office action of March 8, 2006

Claim Rejections- 35 U.S.C. §103

Claim 4 was rejected under 35 U.S.C. §103(a) as being unpatentable over either Ray or Krofchalk.

For the reasons explained above, Claim 1 is allowable over either Ray or Krofchalk. Since Claim 4 depends from Claim 1, Claim 4 is likewise allowable over either Ray or Krofchalk.

Claim 4 was also rejected under 35 U.S.C. §103(a) as being unpatentable over Ray in view of O'Connell. O'Connell was cited as teaching a "fan chamber comprising a layer of filter medium 37 to provide sealing, vibration absorption and sound attenuation (col. 2, lines 5-11)." Since Claim 4 does not recite a "layer of filter medium," it appears that the Examiner may have intended to refer to some other claim, perhaps Claim 8. In any event, both Claims 4 and 8 depend from Claim 1, which as noted above is allowable over Ray. O'Connell does not overcome the defects of Ray insofar as Claim 1 is concerned. For example, O'Connell does not teach or suggest "an array controller programmed to operate said plurality of fan units at substantially peak efficiency by strategically turning on and off selective ones of said plurality of fan units." Therefore, Claim 4 (or Claim 8) is allowable over the combination of Ray and O'Connell.

For the above reasons, Applicants respectfully request allowance of Claims 1-15 and 18-21. Should the Examiner have any questions concerning this response, the Examiner is invited to call the undersigned at (503) 227-5631.

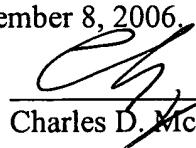
Respectfully submitted,

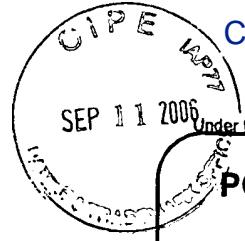
  
 Charles D. McClung  
 Reg. No. 26,568  
 Tel. No.: (503) 227-5631

**CERTIFICATE OF MAILING**

I hereby certify that this correspondence is being deposited with the United States Postal Service as first-class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on September 8, 2006.

Dated: September 8, 2006

  
 Charles D. McClung



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and  
CORRESPONDENCE ADDRESS  
INDICATION FORM**

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PTO/SB/81 (01-06)

Approved for use through 12/31/2008. OMB 0651-0035  
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Application Number	11/154,894
Filing Date	June 15, 2005
First Named Inventor	
Title	FAN ARRAY FAN SECTION IN AIR HANDLING SYSTEM
Art Unit	
Examiner Name	
Attorney Docket Number	CDM/8882.9999

I hereby revoke all previous powers of attorney given in the above-identified application.

I hereby appoint:

Practitioners associated with the Customer Number:

00152

OR

Practitioner(s) named below:

Name	Registration Number

as my/our attorney(s) or agent(s) to prosecute the application identified above, and to transact all business in the United States Patent and Trademark Office connected therewith.

Please recognize or change the correspondence address for the above-identified application to:

The address associated with the above-mentioned Customer Number

OR

The address associated with Customer Number:

OR

<input checked="" type="checkbox"/> Firm or Individual Name	Charles D. McClung		
Address	1600 ODS Tower 601 SW Second Avenue		
City	Portland	State	OR
Country	USA		
Telephone	(503) 227-5631	Email	chuck@chemofflaw.com

I am the:

Applicant/Inventor.

Assignee of record of the entire interest. See 37 CFR 3.71.

Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)

**SIGNATURE of Applicant or Assignee of Record**

Signature			Date	8/25/2006
Name	Kevin W. Donnelly	Telephone	(401) 751-1600	
Title and Company	Vice President, General Counsel and Secretary - Huntair, Inc.			

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below.

\*Total of forms are submitted.

This collection of information is required by 37 CFR 1.31, 1.32 and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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**CL 525**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**  
**CERTIFICATE UNDER 37 CFR §3.73(b)**

CIPR  
SEP 11 2006

Applicant : Hopkins, Lawrence G.  
 App. No. : 11/154,894  
 Filed : 06/15/2005  
 Title : FAN ARRAY FAN SECTION IN AIR-HANDLING SYSTEMS  
 (Assignee) : Huntair Inc., an Oregon corporation  
                   (Type of Assignee, e.g., corporation, partnership,  
                   university, government agency, etc.)

certifies that it is the assignee of the entire right, title and interest  
 in the patent application identified above by virtue of either:

- A. [ ] An assignment from the inventor(s) of the patent application  
 identified above.  
 OR  
 B. [X] A chain of title from the inventor(s), of the patent  
 application identified above, to the current assignee as shown  
 below:
1. From: Cleanpak International Inc. To: Huntair Inc.
- The document was recorded in the Patent and Trademark Office at  
 Reel 017586, Frame 0137, or for which a copy is attached.
2. From: \_\_\_\_\_ To: \_\_\_\_\_
- The document was recorded in the Patent and Trademark Office at  
 Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy is attached.
- [ ] Additional documents in the chain of title are listed on a  
 supplemental sheet.
- [ ] Copies of assignments or other documents in the chain of title  
 are attached. (Where one or more of the documents is  
 unrecorded.)

The undersigned has reviewed all the documents in the chain of title  
 of the patent application identified above and, to the best of  
 undersigned's knowledge and belief, title is in the assignee identified  
 above.

The undersigned (whose title is supplied below) is empowered to sign  
 this Certificate on behalf of the assignee.

I hereby declare that all statements made herein of my own knowledge  
 are true, and that all statements made on information and belief are  
 believed to be true; and further, that these statements are made with the  
 knowledge that willful false statements, and the like so made, are  
 punishable by fine or imprisonment, or both, under Section 1001, Title 18  
 of the United States Code, and that such willful false statements may  
 jeopardize the validity of the application or any patent issuing thereon.

Date : September 8, 2006  
 Name : Charles D. McClung  
 Title : Attorney for the Assignee (copy of Power of Attorney attached)

Signature: CDM

Chernoff, Vilhauer, McClung & Stenzel, LLP  
 1600 ODS Tower  
 601 S.W. Second Avenue  
 Portland, Oregon 97204-3157  
 Tel.: (503) 227-5631

CL 526



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For pending or abandoned applications please consult USPTO staff.*

**Total Assignments: 2****Patent #:** NONE**Issue Dt:****Application #:** 11154894 **Filing Dt:** 06/15/2005**Publication #:** US20050232753 **Pub Dt:** 10/20/2005**Inventor:** Lawrence G. Hopkins**Title:** Fan array fan section in air-handling systems**Assignment: 1****Reel/Frame:** 016702/0901**Recorded:** 06/15/2005**Pages:** 2**Conveyance:** ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS).**Assignor:** HOPKINS, LAWRENCE G.**Exec Dt:** 03/22/2004**Assignee:** HUNTAIR INC.11555 SW MYSLOWN STREET  
TUALATIN, OREGON 97062**Correspondent:** KAREN DANA OSTERLAW OFFICE OF KAREN DANA OSTER, LLC  
PMB 1020, 15450 SW BOONES FERRY RD. #9  
LAKE OSWEGO, OREGON 97035**Assignment: 2****Reel/Frame:** 017586/0137**Recorded:** 05/08/2006**Pages:** 12**Conveyance:** SECURITY AGREEMENT**Assignors:** CLEANPAK INTERNATIONAL, INC.**Exec Dt:** 04/27/2006HUNTAIR, INC.**Exec Dt:** 04/26/2006**Assignee:** UBS AG, STAMFORD BRANCH, AS ADMINISTRATIVE AGENT677 WASHINGTON BOULEVARD  
STAMFORD, CONNECTICUT 06901**Correspondent:** CORPORATION SERVICE COMPANY1133 AVENUE OF THE AMERICAS  
SUITE 3100  
NEW YORK, NY 10036

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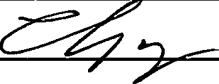
**TRANSMITTAL  
FORM**

*(to be used for all correspondence after initial filing)*

		Application Number	11/154,894
		Filing Date	06/15/2005
		First Named Inventor	Hopkins, Lawrence G.
		Art Unit	3744
		Examiner Name	Nguyen, Nihn H.
Total Number of Pages in Submission	19	Attorney Docket Number	CDM/8887.9999

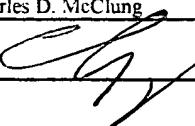
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**SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT**

Firm Or Individual Name	Charles D. McClung Chernoff, Vilhauer, McClung & Stenzel, LLP 1600 ODS Tower 601 S.W. Second Avenue Portland, OR 97204
Signature	
Date	September 8, 2006

**CERTIFICATE OF TRANSMISSION/MAILING**

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below.

Typed or Printed Name	Charles D. McClung		
Signature		Date	September 8, 2006

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Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).

# FEE TRANSMITTAL for FY 2006

Applicant claims small entity status. See 37 CFR 1.27

**TOTAL AMOUNT OF PAYMENT** (\$ 1,150.00)

#### Complete If Known

Application Number	11/154,894
Filing Date	06/15/2005
First Named Inventor	Hopkins, Lawrence G.
Examiner Name	Nguyen, Nihn H.
Art Unit	3744
Attorney Docket No.	CDM/8887.9999

#### METHOD OF PAYMENT (check all that apply)

- Check  Credit Card  Money Order  None  Other (please identify) : \_\_\_\_\_
- Deposit Account Deposit Account Number: 03-1550 Deposit Account Name: Chemoff, Vilhauer, McClung & Stenzel, LLP

For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)

- Charge fee(s) indicated below  Charge fee(s) indicated below, except for the filing fee
- Charge any additional fee(s) or underpayments of fee(s)  Credit any overpayments

Under 37 CFR 1.16 and 1.17

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#### FEE CALCULATION

##### 1. BASIC FILING, SEARCH, AND EXAMINATION FEES

<u>Application Type</u>	<u>FILING FEES</u>		<u>SEARCH FEES</u>		<u>EXAMINATION FEES</u>		
	<u>Fee (\$)</u>	<u>Fee(\$)</u>	<u>Fee(\$)</u>	<u>Fee(\$)</u>	<u>Fee(\$)</u>	<u>Fee(\$)</u>	<u>Fees Paid (\$)</u>
Utility	300	150	500	250	200	100	_____
Design	200	100	100	50	130	65	_____
Plant	200	100	300	150	160	80	_____
Reissue	300	150	500	250	600	300	_____
Provisional	200	100	0	0	0	0	_____

##### 2. EXCESS CLAIM FEES

###### Fee Description

Each claim over 20 (including Reissues)

Each independent claim over 3 (including Reissues)

Multiple dependent claims

<u>Total Claims</u>	<u>Extra Claims</u>	<u>Fee(\$)</u>	<u>Fee Paid (\$)</u>	<u>Small Entity</u>	
				<u>Fee (\$)</u>	<u>Fee (\$)</u>
—20 or HP=	—	x —	= —	50	25

HP = highest number of total claims paid for, if greater than 20.

<u>Indep. Claims</u>	<u>Extra Claims</u>	<u>Fee(\$)</u>	<u>Fee Paid (\$)</u>	<u>Multiple Dependent Claims</u>	
				<u>Fee (\$)</u>	<u>Fee Paid (\$)</u>
—3 or HP=	—	x —	= —	—	—

HP = highest number of independent claims paid for, if greater than 3.

##### 3. APPLICATION SIZE FEE

If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

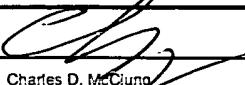
<u>Total Sheets</u>	<u>Extra Sheets</u>	<u>Number of each additional 50 or fraction thereof</u>	<u>Fee (\$)</u>	<u>Fee Paid (\$)</u>
—100 =	—	/ 50 = — (round up to a whole number) x — = —		

##### 4. OTHER FEE(S)

Non-English Specification, \$130 fee (no small entity discount)

Other (e.g., late filing surcharge) : Petition for Extension of Time (\$1,020); and Terminal Disclaimer fee (\$130)

#### SUBMITTED BY

Signature		Registration No. (Attorney/Agent)	26,568	Telephone	(503) 227-5631
Name (Pnnt/Type)	Charles D. McClung			Date	09/08/2005

This collection of information is required by 37 CFR 1.136. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing this form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

CL 529

<b>PETITION FOR EXTENSION OF TIME UNDER 37 CFR 1.136(a)</b>		Docket Number (Optional)
<b>FY 2005</b>		CDM/8887.9999
<i>(Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).)</i>		
Application Number 11/154,894		Filed 06/15/2005
For Hopkins, Lawrence G.		
Art Unit 3744		Examiner Nguyen, Nihn H.

This is a request under the provisions of 37 CFR 1.136(a) to extend the period for filing a reply in the above identified application.

The requested extension and fee are as follows (check time period desired and enter the appropriate fee below):

	<u>Fee</u>	<u>Small Entity Fee</u>	
<input type="checkbox"/> One month (37 CFR 1.17(a)(1))	\$120	\$60	\$_____
<input type="checkbox"/> Two months (37 CFR 1.17(a)(2))	\$450	\$225	\$_____
<input checked="" type="checkbox"/> Three months (37 CFR 1.17(a)(3))	\$1020	\$510	<u>\$1020</u>
<input type="checkbox"/> Four months (37 CFR 1.17(a)(4))	\$1590	\$795	\$_____
<input type="checkbox"/> Five months (37 CFR 1.17(a)(5))	\$2160	\$1080	\$_____

- Applicant claims small entity status. See 37 CFR 1.27.  
 A check in the amount of the fee is enclosed.  
 Payment by credit card. Form PTO-2038 is attached.  
 The Director has already been authorized to charge fees in this application to a Deposit Account.  
 The Director is hereby authorized to charge any fees which may be required, or credit any overpayment, to

Deposit Account Number 03-1550 . I have enclosed a duplicate copy of this sheet.

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I am the  applicant/inventor.

- assignee of record of the entire interest. See 37 CFR 3.71  
 Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96).  
 attorney or agent of record. Registration Number 26,568  
 attorney or agent under 37 CFR 1.34.

Registration number if acting under 37 CFR 1.34. \_\_\_\_\_ .

  
 Signature  
 Charles D. McClung

September 8, 2006

Date

(503) 227-5631

Typed or printed name

Telephone Number

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below.

- Total of \_\_\_\_\_ forms are submitted.

This collection of information is required by 37 CFR 1.136(a). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 6 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

CL 530

09/13/2006 2JUkR1 00000009 11154694  
 01 FC:1253  
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SEP 11 2006

PTO/SB/25 (07-06)

Approved for use through 09/30/2006. OMB 0651-0031  
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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TERMINAL DISCLAIMER TO OBLIGATE A PROVISIONAL DOUBLE PATENTING  
REJECTION OVER A PENDING "REFERENCE" APPLICATIONDocket Number (Optional)  
CDM/8887.9999

In re Application of: Hopkins, Lawrence G.

Application No.: 11/154,894

Filed: 06/15/2005

For: FAN ARRAY FAN SECTION IN AIR-HANDLING SYSTEMS

The owner\*, Huntair Inc., of 100 percent interest in the instant application hereby disclaims, except as provided below, the terminal part of the statutory term of any patent granted on the instant application which would extend beyond the expiration date of the full statutory term of any patent granted on pending **reference Application Number 10/806,775**, filed on 03/22/2004, as such term is defined in 35 U.S.C. 154 and 173, and as the term of any patent granted on said **reference** application may be shortened by any terminal disclaimer filed prior to the grant of any patent on the pending **reference** application. The owner hereby agrees that any patent so granted on the instant application shall be enforceable only for and during such period that it and any patent granted on the **reference** application are commonly owned. This agreement runs with any patent granted on the instant application and is binding upon the grantee, its successors or assigns.

In making the above disclaimer, the owner does not disclaim the terminal part of any patent granted on the instant application that would extend to the expiration date of the full statutory term as defined in 35 U.S.C. 154 and 173 of any patent granted on said **reference** application, "as the term of any patent granted on said **reference** application may be shortened by any terminal disclaimer filed prior to the grant of any patent on the pending **reference** application," in the event that: any such patent: granted on the pending **reference** application: expires for failure to pay a maintenance fee, is held unenforceable, is found invalid by a court of competent jurisdiction, is statutorily disclaimed in whole or terminally disclaimed under 37 CFR 1.321, has all claims canceled by a reexamination certificate, is reissued, or is in any manner terminated prior to the expiration of its full statutory term as shortened by any terminal disclaimer filed prior to its grant.

Check either box 1 or 2 below, if appropriate.

1.  For submissions on behalf of a business/organization (e.g., corporation, partnership, university, government agency, etc.), the undersigned is empowered to act on behalf of the business/organization.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

2.  The undersigned is an attorney or agent of record. Reg. No. 26,568



Signature

09/08/2006

Date

Charles D. McClung

Typed or printed name

(503) 227-5631

Telephone Number

- Terminal disclaimer fee under 37 CFR 1.20(d) is included.

**WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.**

\*Statement under 37 CFR 3.73(b) is required if terminal disclaimer is signed by the assignee (owner).  
Form PTO/SB/96 may be used for making this statement. See MPEP § 324.

This collection of information is required by 37 CFR 1.321. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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## PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875 Effective December 8, 2004

Application or Docket Number

11154894

## APPLICATION AS FILED - PART I

(Column 1)

(Column 2)

FOR	NUMBER FILED	NUMBER EXTRA
BASIC FEE (37 CFR 1.16(a), (b) or (c))	N/A	N/A
SEARCH FEE (37 CFR 1.16(h), (i), or (m))	N/A	N/A
EXAMINATION FEE (37 CFR 1.16(d), (d), or (g))	N/A	N/A
TOTAL CLAIMS (37 CFR 1.16(l))	20 minus 20 =	0
INDEPENDENT CLAIMS (37 CFR 1.16(h))	2 minus 3 =	8
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).	
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))		

SMALL ENTITY

OR

OTHER THAN  
SMALL ENTITY

RATE (\$)	FEES (\$)
N/A	150.00
N/A	\$250
N/A	\$100
X\$ 25	
X100	
+180=	

RATE (\$)	FEES (\$)
N/A	300.00
N/A	\$500
N/A	\$200
X\$50	
X200	
+360=	

\* If the difference in column 1 is less than zero, enter "0" in column 2.

TOTAL 500

TOTAL

## APPLICATION AS AMENDED - PART II

(Column 1)

(Column 2)

(Column 3)

AMENDMENT A	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
Total (37 CFR 1.16(l))	19	Minus	20	0
Independent (37 CFR 1.16(h))	1	Minus	3	0
Application Size Fee (37 CFR 1.16(s))				
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(l))				

SMALL ENTITY

OR

OTHER THAN  
SMALL ENTITY

RATE (\$)	ADDI- TIONAL FEE (\$)
X\$ 25	
X100	
+180=	
TOTAL ADD'L FEE	

RATE (\$)	ADDI- TIONAL FEE (\$)
X\$50	
X200	
+360=	
TOTAL ADD'L FEE	

(Column 1)

(Column 2)

(Column 3)

AMENDMENT B	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
Total (37 CFR 1.16(l))		Minus	0	0
Independent (37 CFR 1.16(h))		Minus	0	0
Application Size Fee (37 CFR 1.16(s))				
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(l))				

RATE (\$)	ADDI- TIONAL FEE (\$)
X\$ 25	
X100	
+180=	
TOTAL ADD'L FEE	

RATE (\$)	ADDI- TIONAL FEE (\$)
X\$50	
X200	
+360=	
TOTAL ADD'L FEE	

\* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

\*\* If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".

\*\*\* If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".

The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

CL 532

<b>Index of Claims</b> 	<b>Application/Control No.</b> <b>11/154,894</b> <b>Examiner</b> <b>Ninh H. Nguyen</b>	<b>Applicant(s)/Patent under Reexamination</b> <b>HOPKINS, LAWRENCE G.</b> <b>Art Unit</b> <b>3745</b>																																																																																																																																																																																																																																																																																																																								
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<b>Application Number</b> 	Application/Control No. 11/154,894	Applicant(s)/Patent under Reexamination HOPKINS, LAWRENCE G.
<b>Document Code - DISQ</b>		<b>Internal Document – DO NOT MAIL</b>

<b>TERMINAL DISCLAIMER</b>  Date Filed : 09/11/06	<input checked="" type="checkbox"/> APPROVED	<input type="checkbox"/> DISAPPROVED
	<b>This patent is subject to a Terminal Disclaimer</b>	

<b>Approved/Disapproved by:</b>  JH
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U.S. Patent and Trademark Office

**EAST Search History**

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L2	2	(fan and array and air and handling and unit and structure and peak and efficiency).clm..	US-PGPUB; USPAT	OR	ON	2006/11/27 08:13



## UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
 United States Patent and Trademark Office  
 Address: COMMISSIONER FOR PATENTS  
 P.O. Box 1450  
 Alexandria, Virginia 22313-1450  
 www.uspto.gov

## NOTICE OF ALLOWANCE AND FEE(S) DUE

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SILICON VALLEY PATENT GROUP LLP  
 2350 MISSION COLLEGE BOULEVARD  
 SUITE 360  
 SANTA CLARA, CA 95054

EXAMINER	
NGUYEN, NINH H	
ART UNIT	PAPER NUMBER
3745	

DATE MAILED: 11/29/2006

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/154,894	06/15/2005	Lawrence G. Hopkins	HTR007-3C US	2747

TITLE OF INVENTION: FAN ARRAY FAN SECTION IN AIR-HANDLING SYSTEMS

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	\$700	\$300	\$0	\$1000	02/28/2007

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

## HOW TO REPLY TO THIS NOTICE:

## I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

**IMPORTANT REMINDER:** Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

Complete and send this form, together with applicable fee(s), to: Mail **Mail Stop ISSUE FEE**  
**Commissioner for Patents**  
**P.O. Box 1450**  
**Alexandria, Virginia 22313-1450**  
**or Fax (571) 273-2885**

**INSTRUCTIONS:** This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

34036 7590 11/29/2006

**SILICON VALLEY PATENT GROUP LLP**  
**2350 MISSION COLLEGE BOULEVARD**  
**SUITE 360**  
**SANTA CLARA, CA 95054**

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

**Certificate of Mailing or Transmission**

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)

(Signature)

(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/154,894	06/15/2005	Lawrence G. Hopkins	HTR007-3C US	2747

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APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	\$700	\$300	\$0	\$1000	02/28/2007

EXAMINER	ART UNIT	CLASS-SUBCLASS
NGUYEN, NINH H	3745	415-119000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

"Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a Customer Number is required.

2. For printing on the patent front page, list

(1) the names of up to 3 registered patent attorneys or agents OR, alternatively,

(2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

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3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

/

Please check the appropriate assignee category or categories (will not be printed on the patent):  Individual  Corporation or other private group entity  Government

4a. The following fee(s) are submitted:

Issue Fee  
 Publication Fee (No small entity discount permitted)  
 Advance Order - # of Copies \_\_\_\_\_

4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)

A check is enclosed.  
 Payment by credit card. Form PTO-2038 is attached.  
 The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number \_\_\_\_\_ (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27.  b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature \_\_\_\_\_

Date \_\_\_\_\_

Typed or printed name \_\_\_\_\_

Registration No. \_\_\_\_\_

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/154,894	06/15/2005	Lawrence G. Hopkins	HTR007-3C US	2747
34036	7590	11/29/2006	EXAMINER	
<b>SILICON VALLEY PATENT GROUP LLP</b> 2350 MISSION COLLEGE BOULEVARD SUITE 360 SANTA CLARA, CA 95054				NGUYEN, NINH H
		ART UNIT		PAPER NUMBER
3745				DATE MAILED: 11/29/2006

**Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)**  
 (application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 0 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 0 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

<b>Notice of Allowability</b>	Application No.	Applicant(s)	
	11/154,894	HOPKINS, LAWRENCE G.	
	Examiner	Art Unit	
	Ninh H. Nguyen	3745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1.  This communication is responsive to the amendment dated 11 September 2006.
2.  The allowed claim(s) is/are 1-15 and 18-21.
3.  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a)  All
  - b)  Some\*
  - c)  None
  1.  Certified copies of the priority documents have been received.
  2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3.  Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

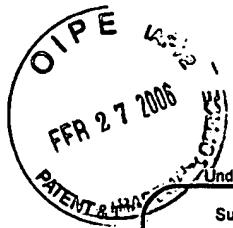
4.  A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5.  CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a)  including changes required by the Notice of Draftperson's Patent Drawing Review ( PTO-948) attached
    - 1)  hereto or 2)  to Paper No./Mail Date \_\_\_\_\_.
  - (b)  including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6.  DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

#### Attachment(s)

1.  Notice of References Cited (PTO-892)
2.  Notice of Draftperson's Patent Drawing Review (PTO-948)
3.  Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date 02/27/06
4.  Examiner's Comment Regarding Requirement for Deposit of Biological Material
5.  Notice of Informal Patent Application
6.  Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_.
7.  Examiner's Amendment/Comment
8.  Examiner's Statement of Reasons for Allowance
9.  Other \_\_\_\_\_.

  
**NINH H. NGUYEN**  
**PRIMARY EXAMINER**



PTO/SB/08A (07-05)

Approved for use through 07/31/2006. OMB 0651-0031  
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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Substitute for form 1449/PTO		<b>Complete if Known</b>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <i>(Use as many sheets as necessary)</i>		Application Number	11/154,894
		Filing Date	06/15/2005
		First Named Inventor	Lawrence G. Hopkins
		Art Unit	3744
		Examiner Name	Ninh H. Nguyen
		Attorney Docket Number	HTR007-3C US
Sheet	1	of	1

Examiner Signature	/Ninh Nguyen/	Date Considered	11/27/2006
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**\*EXAMINER:** Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. **\*Applicant's unique citation designation number (optional).** **\*See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04.** **\*Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3).** **\*For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document.** **\*Kind of document by appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible.** **\*Applicant is to place a check mark here if English language Translation is attached.**

This collection of information is required by 37 CFR 1.97 and 1.88. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22311-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22311-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

<b>Issue Classification</b> 	Application/Control No. 11/154,894	Applicant(s)/Patent under Reexamination HOPKINS, LAWRENCE G.
	Examiner Ninh H. Nguyen	Art Unit 3745

ISSUE CLASSIFICATION										
ORIGINAL				INTERNATIONAL CLASSIFICATION						
CLASS		SUBCLASS		CLAIMED			NON-CLAIMED			
415		61		F	04	D	25	/16	/	
CROSS REFERENCES										
CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)									
415	119								/	
416	120								/	
417	3	423.5	426						/	
									/	
									/	
// (Assistant Examiner) (Date)				 NING H. NGUYEN PRIMARY EXAMINER (Primary Examiner) 11/27/06 (Date)			Total Claims Allowed: 19			
T Cooper 11-26-06 (Legal Instruments Examiner) (Date)				O.G. Print Claim(s) 1			O.G. Print Fig. 14, 17			

<input type="checkbox"/> Claims renumbered in the same order as presented by applicant		<input type="checkbox"/> CPA		<input type="checkbox"/> T.D.		<input type="checkbox"/> R.1.47	
Final	Original	Final	Original	Final	Original	Final	Original
1	1	31	61	91	121	151	181
2	2	32	62	92	122	152	182
6	3	33	63	93	123	153	183
7	4	34	64	94	124	154	184
8	5	35	65	95	125	155	185
9	6	36	66	96	126	156	186
10	7	37	67	97	127	157	187
11	8	38	68	98	128	158	188
12	9	39	69	99	129	159	189
13	10	40	70	100	130	160	190
14	11	41	71	101	131	161	191
3	12	42	72	102	132	162	192
4	13	43	73	103	133	163	193
5	14	44	74	104	134	164	194
15	15	45	75	105	135	165	195
16		46	76	106	136	166	196
17		47	77	107	137	167	197
17	18	48	78	108	138	168	198
18	19	49	79	109	139	169	199
19	20	50	80	110	140	170	200
16	21	51	81	111	141	171	201
22		52	82	112	142	172	202
23		53	83	113	143	173	203
24		54	84	114	144	174	204
25		55	85	115	145	175	205
26		56	86	116	146	176	206
27		57	87	117	147	177	207
28		58	88	118	148	178	208
29		59	89	119	149	179	209
30		60	90	420	150	180	210

<b>Search Notes</b> 	<b>Application/Control No.</b> 11/154,894	<b>Applicant(s)/Patent under Reexamination</b> HOPKINS, LAWRENCE G.
	<b>Examiner</b> Ninh H. Nguyen	<b>Art Unit</b> 3745

INTERFERENCE SEARCHED			
Class	Subclass	Date	Examiner



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Bib Data Sheet

CONFIRMATION NO. 2747

SERIAL NUMBER 11/154,894	FILING OR 371(c) DATE 06/15/2005 RULE	CLASS 415	GROUP ART UNIT 3745	ATTORNEY DOCKET NO. HTR007-3C US
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## APPLICANTS

Lawrence G. Hopkins, Portland, OR;

\*\* CONTINUING DATA \*\*\*\* *nlm*

This application is a CON of 10/806,775 03/22/2004 PAT 7,137,775 which claims benefit of 60/456,413 03/20/2003  
 and claims benefit of 60/554,702 03/20/2004  
 and is a CIP of PCT/US04/08578 03/19/2004

\*\* FOREIGN APPLICATIONS \*\*\*\* *None nlm*IF REQUIRED, FOREIGN FILING LICENSE GRANTED \*\* SMALL ENTITY \*\*  
 \*\* 07/12/2005

Foreign Priority claimed	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no	STATE OR COUNTRY OR	SHEETS DRAWING 15	TOTAL CLAIMS 20	INDEPENDENT CLAIMS 2
35 USC 119 (a-d) conditions met	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no <input type="checkbox"/> Met after Allowance				
Verified and Acknowledged	Examiner's Signature	Initials			

## ADDRESS

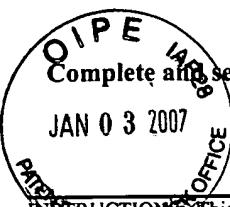
34036

## TITLE

Fan array fan section in air-handling systems

FILING FEE RECEIVED 500	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:	<input type="checkbox"/> All Fees <input type="checkbox"/> 1.16 Fees ( Filing ) <input type="checkbox"/> 1.17 Fees ( Processing Ext. of time ) <input type="checkbox"/> 1.18 Fees ( Issue ) <input type="checkbox"/> Other <input type="checkbox"/> Credit
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CL 543



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34036 7590 11/29/2006

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Charles D. McClung

(Depositor's name)

*CDM*

(Signature)

December 29, 2006

(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/154,894	06/15/2005	Lawrence G. Hopkins	HTR007-3C US	2747

TITLE OF INVENTION: FAN ARRAY FAN SECTION IN AIR-HANDLING SYSTEMS

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	\$700	\$300	\$0	\$1000	02/28/2007
EXAMINER	ART UNIT	CLASS-SUBCLASS		01/04/2007 HDESTA2	00000019 11154894	
NGUYEN, NINH H	3745	415-119000		01 FC:1504 02 FC:8001	300.00 OP 9.00 OP	1400.00 OP
1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).	2. For printing on the patent front page, list					
<input type="checkbox"/> Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.	(1) the names of up to 3 registered patent attorneys or agents OR, alternatively,					
<input type="checkbox"/> "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a Customer Number is required.	(2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.					

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

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(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Huntair Inc.

Tualatin, Oregon

Please check the appropriate assignee category or categories (will not be printed on the patent):  Individual  Corporation or other private group entity  Government

4a. The following fee(s) are submitted:

- Issue Fee  
 Publication Fee (No small entity discount permitted)  
 Advance Order - # of Copies 3

4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)

- A check is enclosed.  
 Payment by credit card. Form PTO-2038 is attached.  
 The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number 03-1550 (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27.  b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature

Date December 29, 2006

Typed or printed name

Charles D. McClung

Registration No. 26,568

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INCLUDING, PATENT, TRADEMARK, COPYRIGHT  
AND UNFAIR COMPETITION MATTERS

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- DENNIS E. STENZEL
- CHARLES D. McCCLUNG
- DONALD B. HASLETT
- J. PETER STAPLES
- WILLIAM O. GENY
- NANCY J. MORIARTY
- KEVIN L. RUSSELL

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• REGISTERED PATENT ATTORNEY

DAVID S. FINE  
SENIOR LAW CLERK

December 29, 2006

Our File: 8887.0008

Mail Stop Issue Fee  
 Commissioner for Patents  
 P.O. Box 1450  
 Alexandria, VA 22313-1450

**Re: U.S. Patent Application Serial No. 11/154,894 of Huntair Inc.  
 Entitled FAN ARRAY FAN SECTION IN AIR-HANDLING  
 SYSTEMS**

Dear Sir or Madam:

Enclosed is Form PTOL-85B (Issue Fee Transmittal), in duplicate, with regard to the above-identified patent application, along with a check in the amount of \$1,709 for payment of the Issue Fee (\$1,400), the publication fee (\$300), and three advance copies of the patent (\$9).

Please mail the patent and address all notices regarding the payment of maintenance fees on the above-identified patent to Chernoff, Vilhauer, McClung & Stenzel, LLP, at the then current address for payor number 00152. A copy of a Power of Attorney to the undersigned is enclosed. The original of the Power of Attorney was filed with the Amendment dated September 8, 2006.

The Commissioner is hereby authorized to charge payment of the foregoing fee, or credit any overpayment, to Deposit Account No. 03-1550. A duplicate copy of this letter is enclosed.

Respectfully submitted,

Charles D. McClung  
 Reg. No. 26,568  
 Attorney for Applicant

CDM/lma  
 Enclosures

CL 545



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APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/154,894	02/20/2007	7179046	HTR007-3C US	2747

34036 7590 01/31/2007  
 SILICON VALLEY PATENT GROUP LLP  
 2350 MISSION COLLEGE BOULEVARD  
 SUITE 360  
 SANTA CLARA, CA 95054

## ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

**Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)**  
 (application filed on or after May 29, 2000)

The Patent Term Adjustment is 0 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at (571)-272-4200.

**APPLICANT(s)** (Please see PAIR WEB site <http://pair.uspto.gov> for additional applicants):

Lawrence G. Hopkins, Portland, OR;